

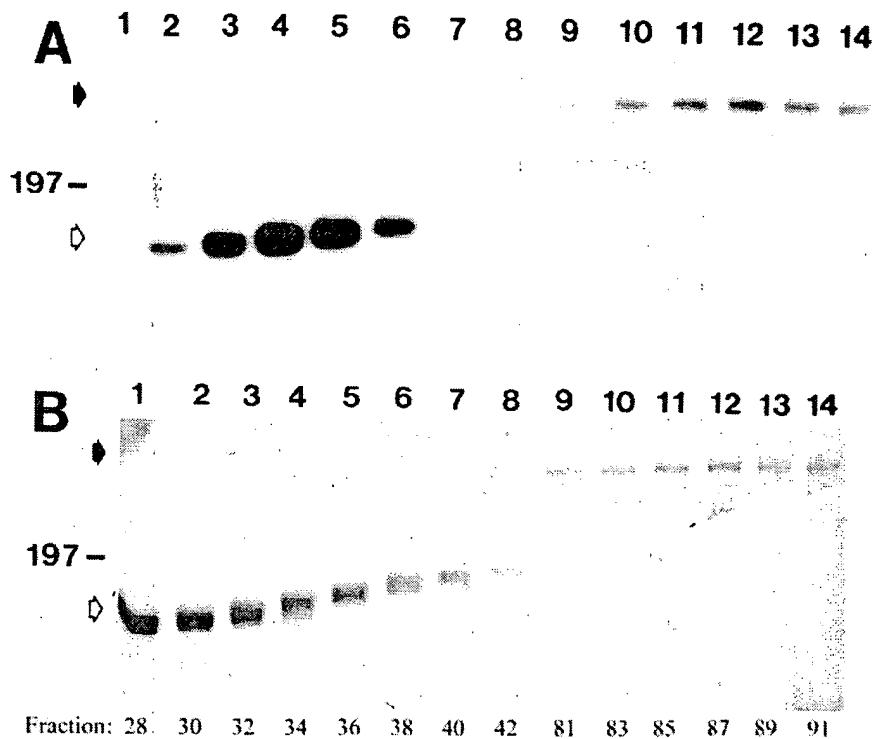
EXPRESS MAIL NO.: EV373446295US DATE DEPOSITED: 11/17/2004

US. Patent Application

Serial No.: 09/842,930
Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS
Inventor: Paul H. Weigel et al. Group: 1647
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D.
Docket No. 5820.603 Examiner: L. Spector
SHEET 1 OF 42 FORMAL DRAWINGS



Figure 1

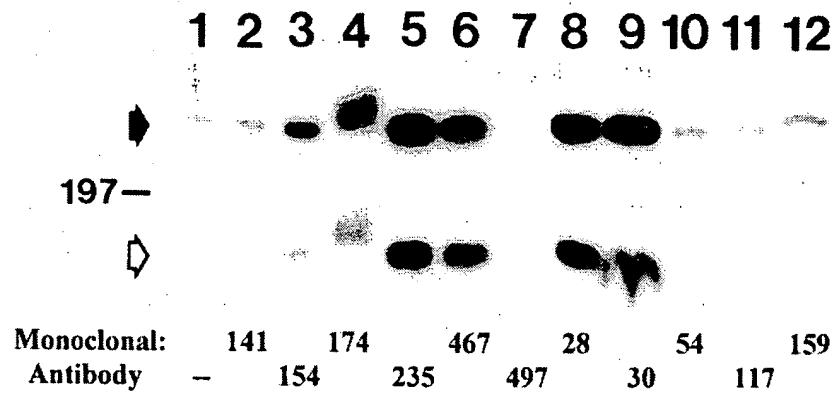


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SHEET 2 OF 42 FORMAL DRAWINGS



Figure 2

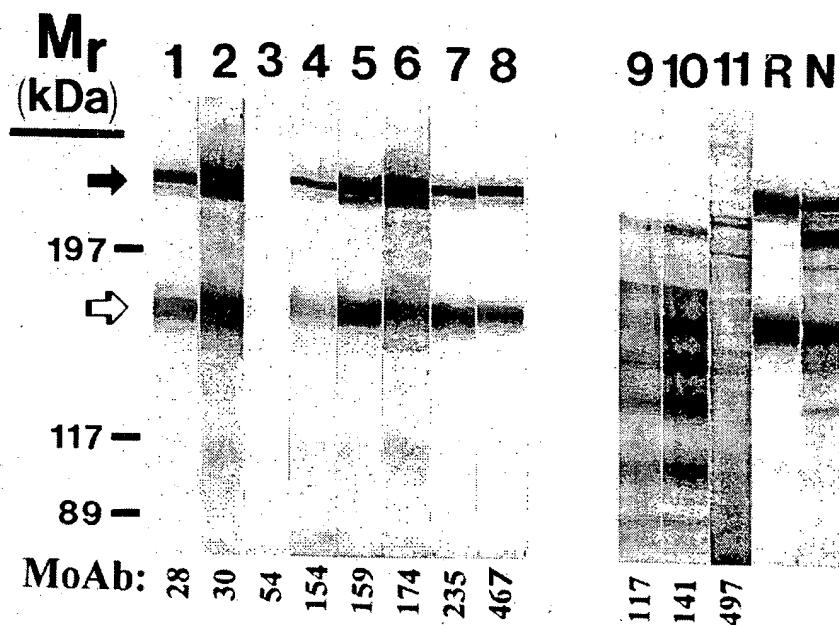


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FORMAL DRAWINGS

Figure 3



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Group: 1647

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Agent:

Kathryn L. Hester, Ph.D.

Examiner: L. Spector

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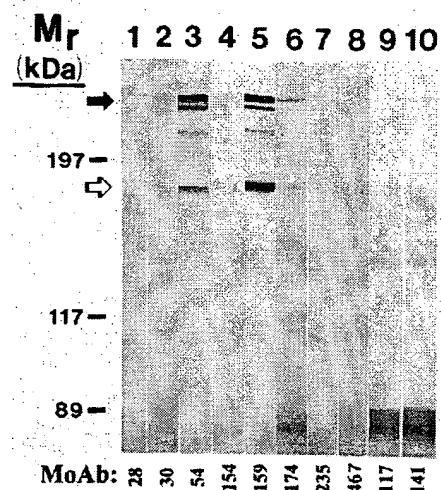
5820.603

SHEET 4 OF 42

FORMAL DRAWINGS



Figure 4



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SHEET 5 OF 42 FORMAL DRAWINGS

Figure 5

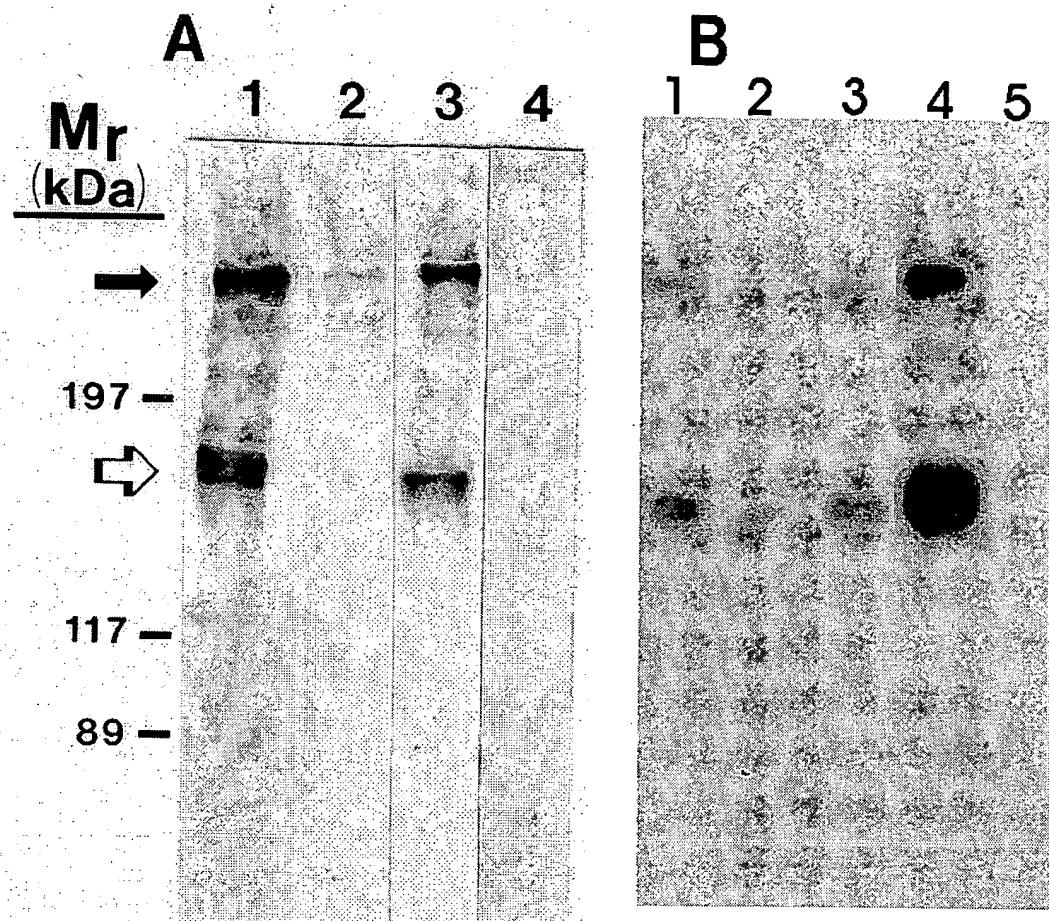
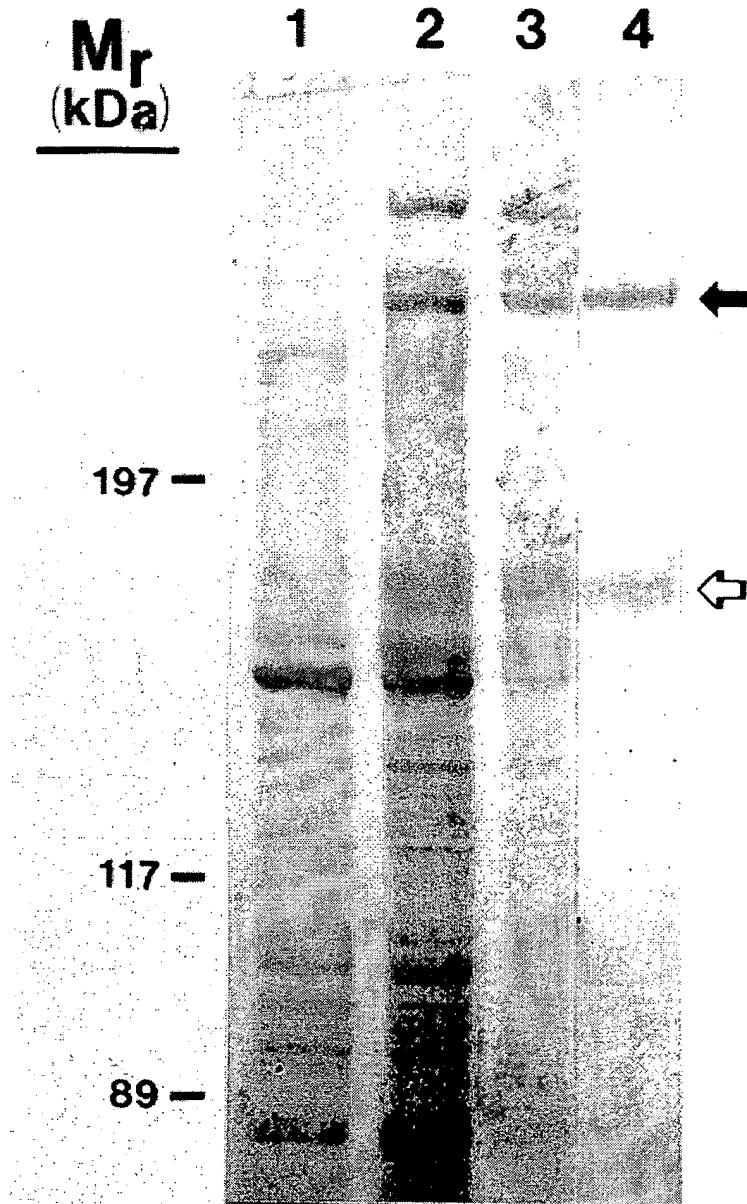




Figure 6



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SHEET 7 OF 42

FORMAL DRAWINGS

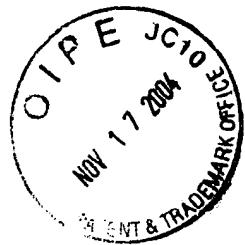


Figure 7

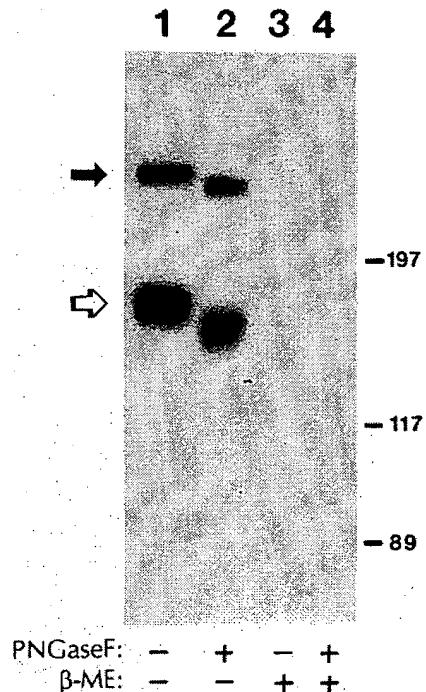


Figure 8

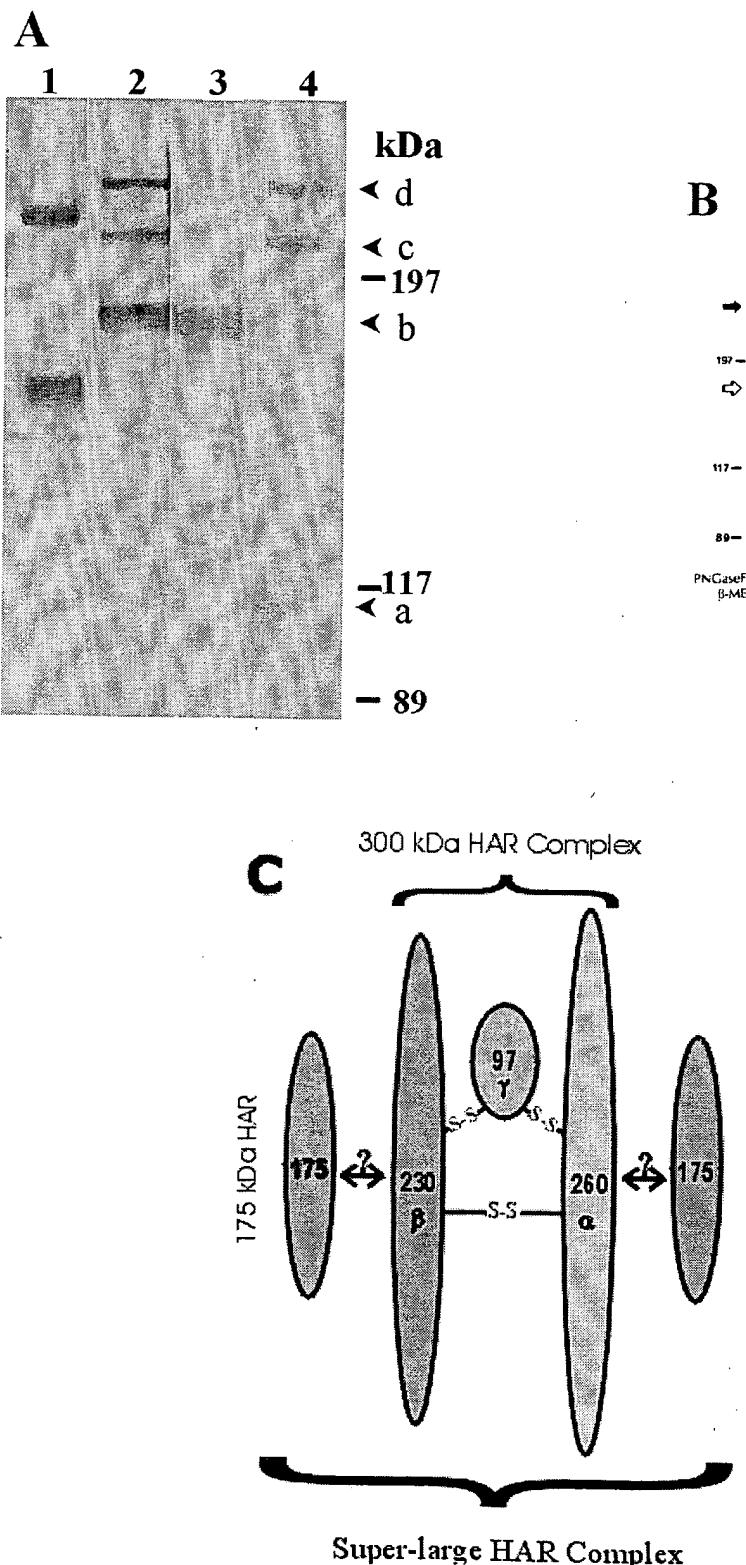
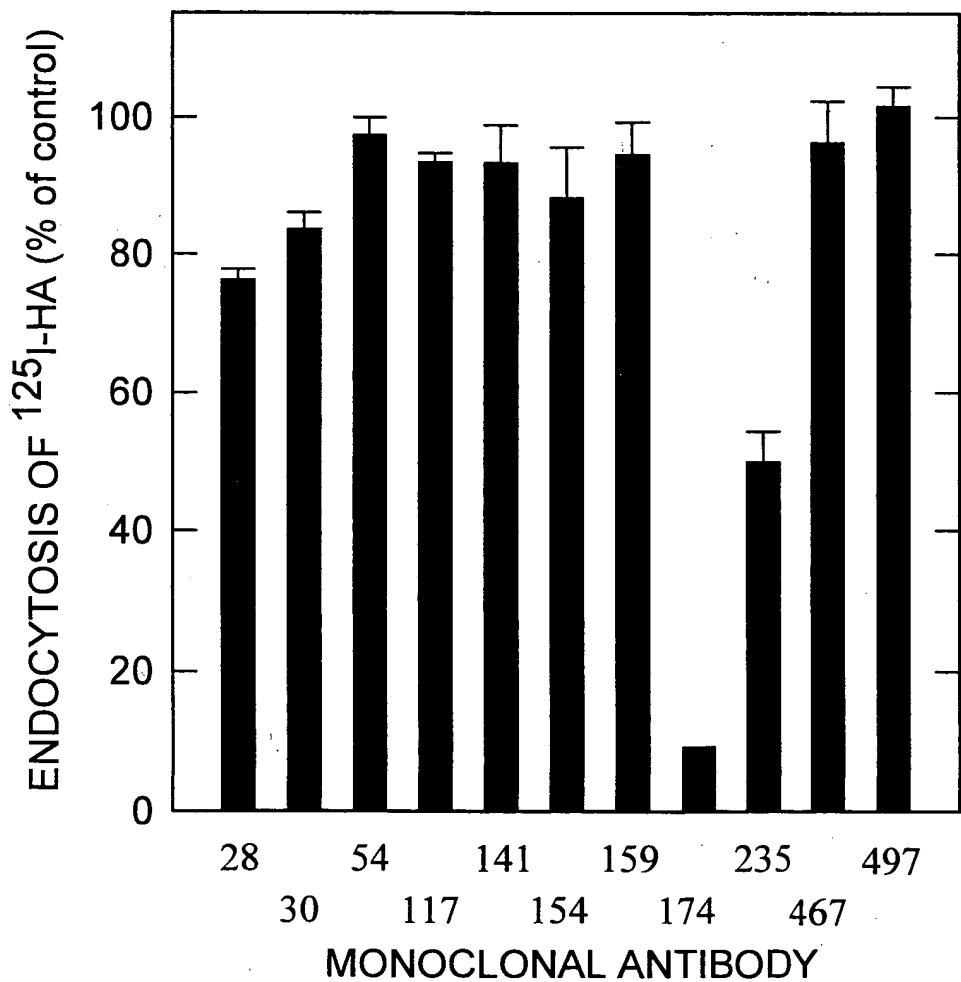


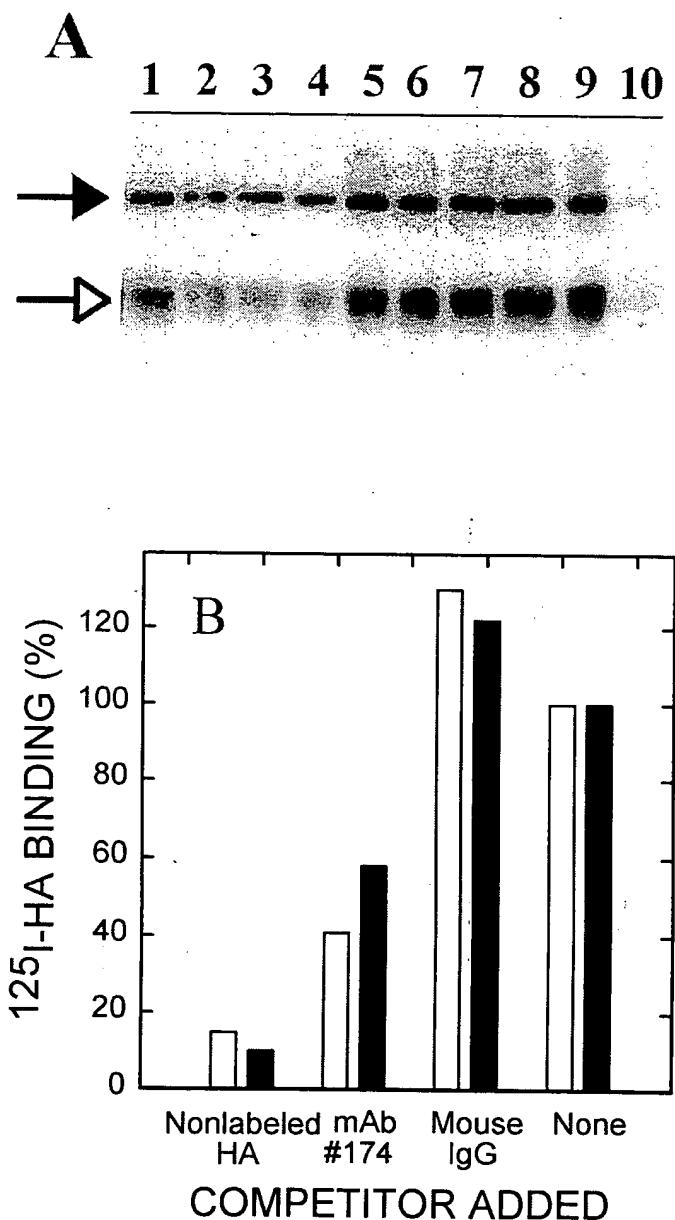


Figure 9



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SHEET 10 OF 42 FORMAL DRAWINGS

Figure 10



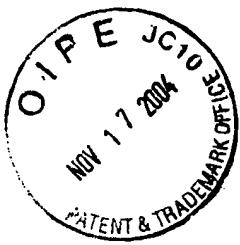
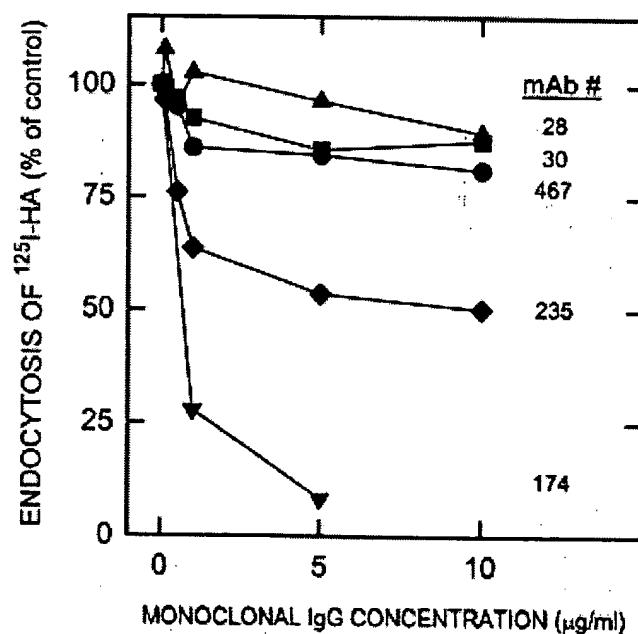


Figure 11

Antibody Inhibition of HA Endocytosis by HARE in LECs



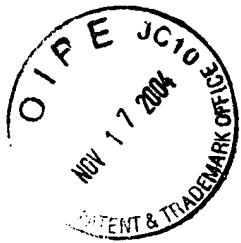


Figure 12

Antibody Inhibition of HA Binding to HARE on LECs is Temperature Dependent

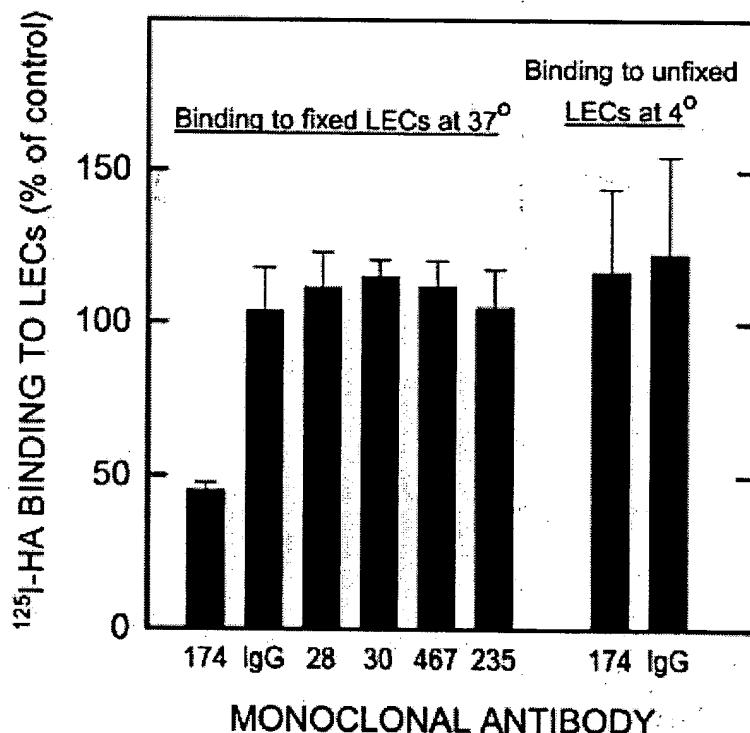
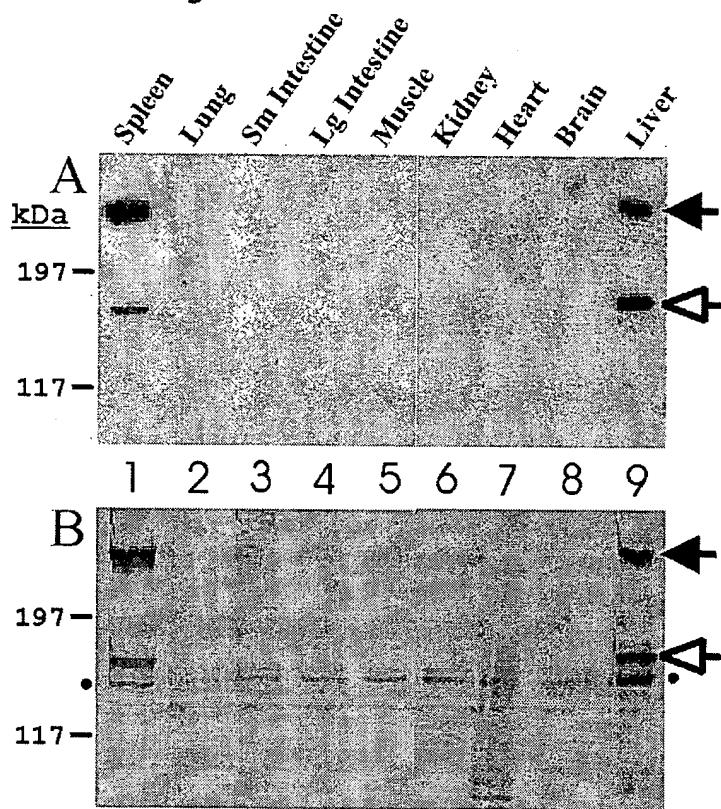




Figure 13

Figure 13



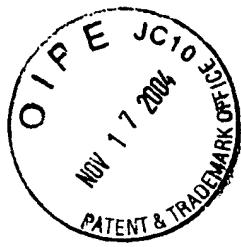
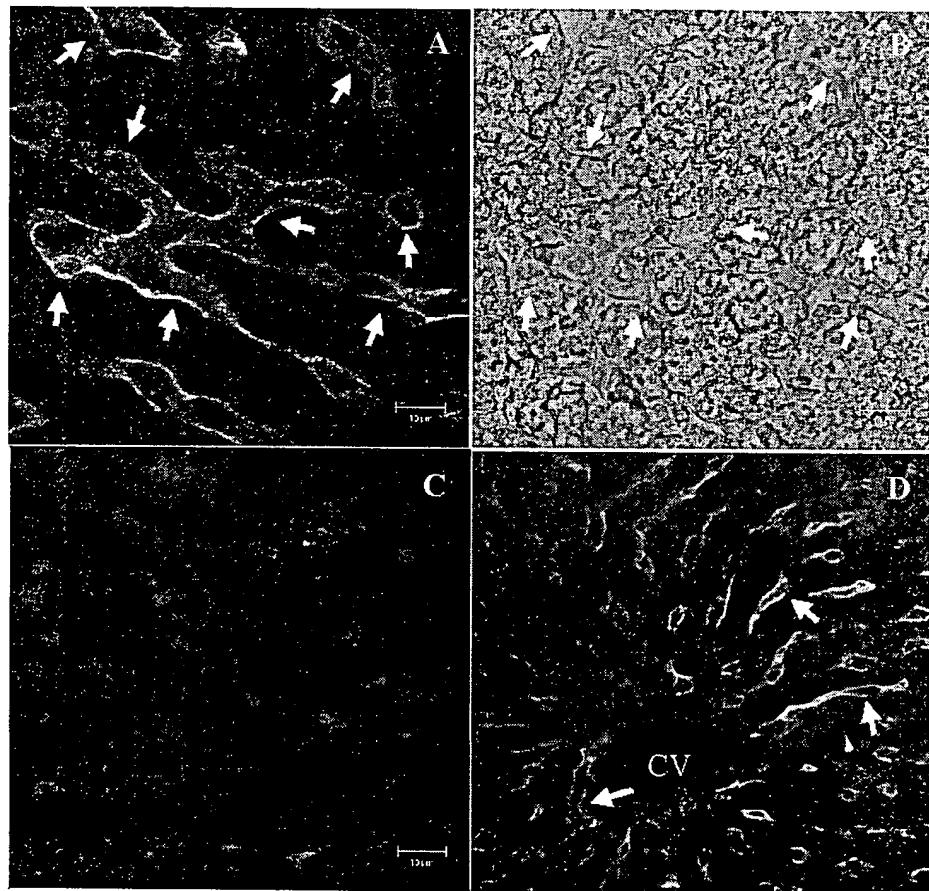


Figure 14



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SHEET 15 OF 42 FORMAL DRAWINGS

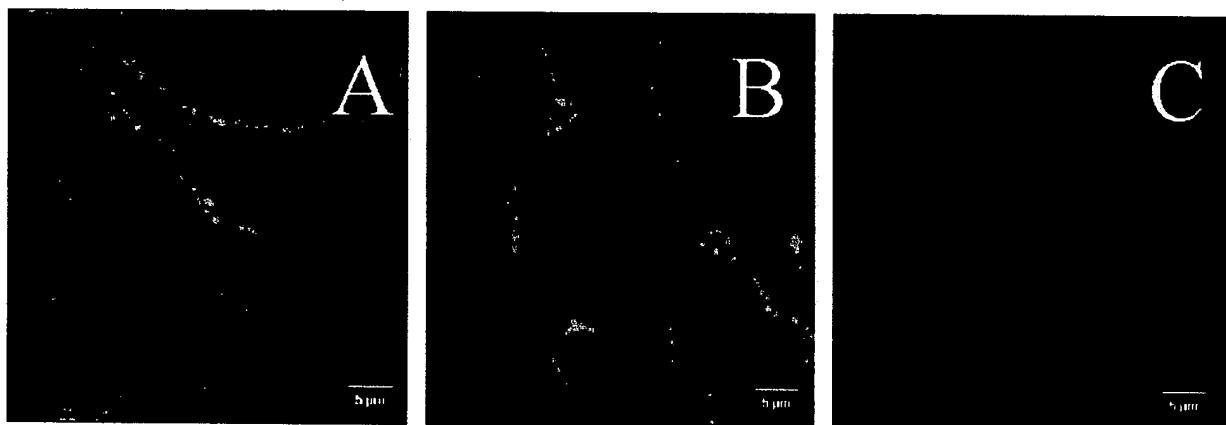
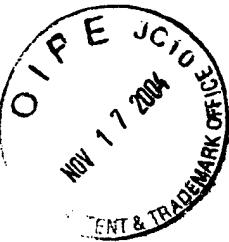


Figure 15

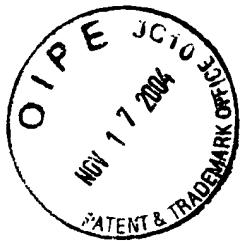
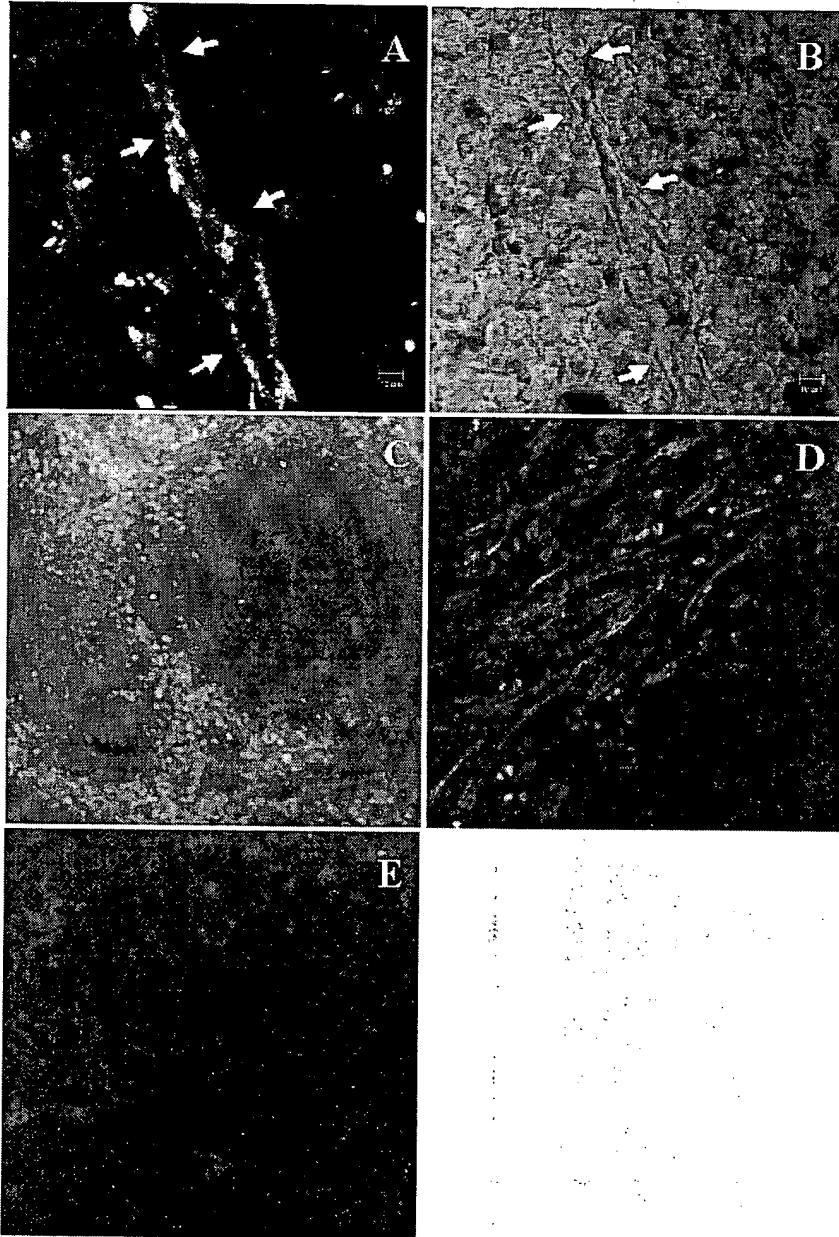


Figure 16



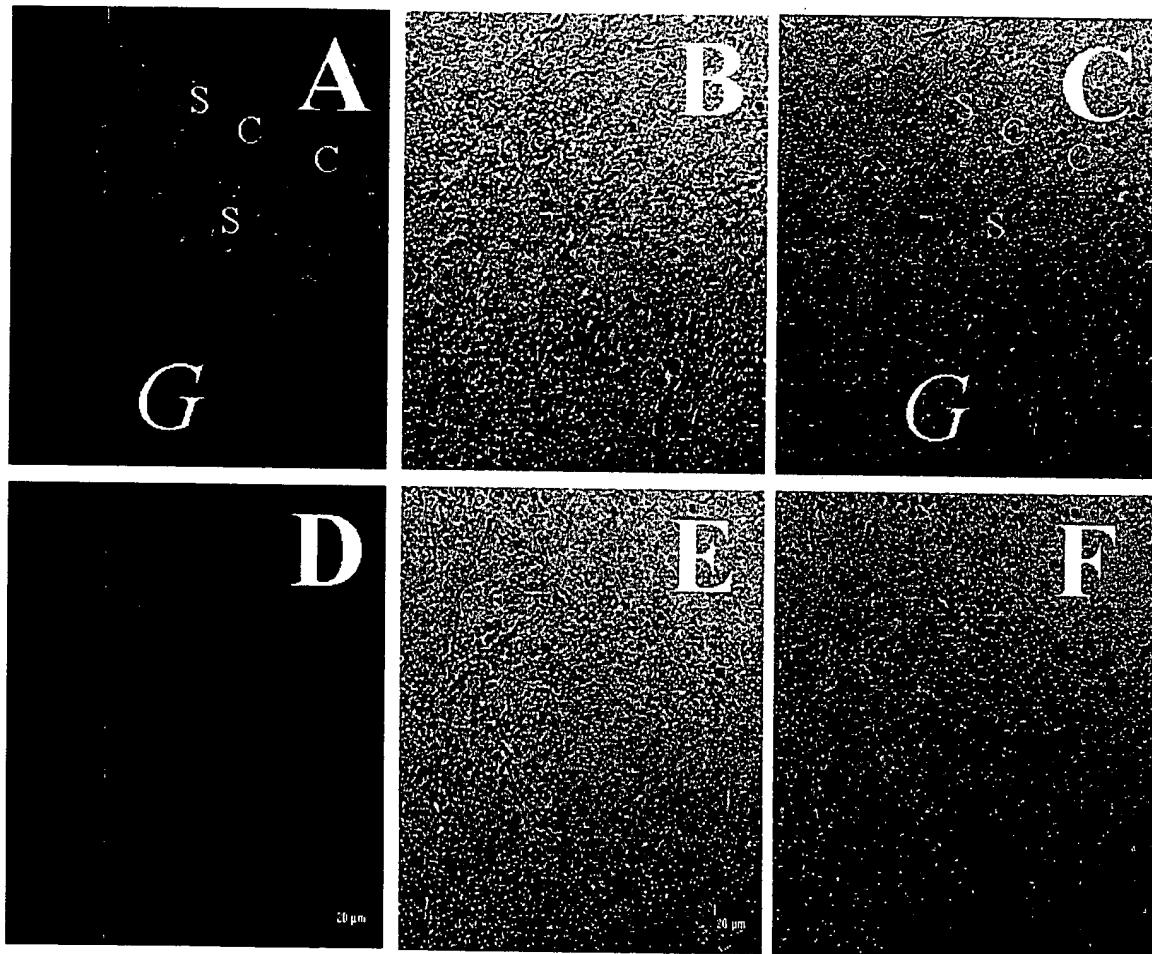
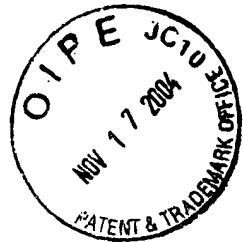


Figure 17

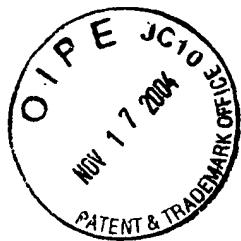
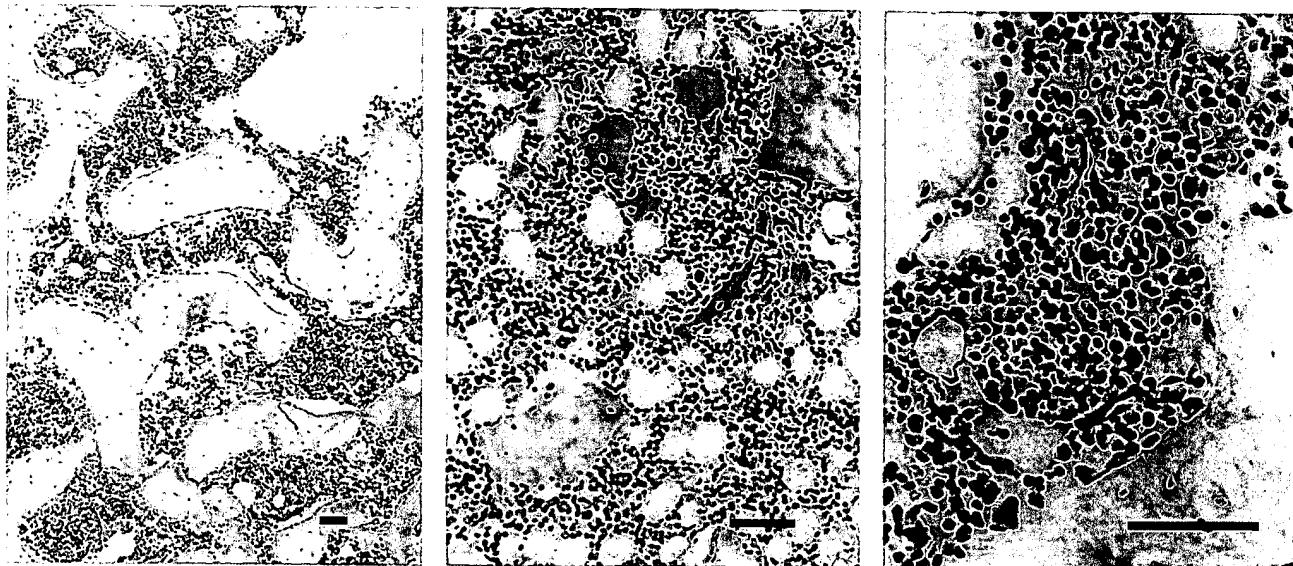


Figure 18

Immunolocalization of HARE in Bone Marrow

Control



Bars = 50 um

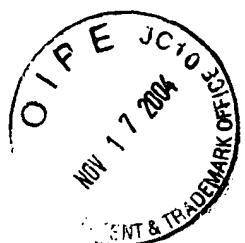
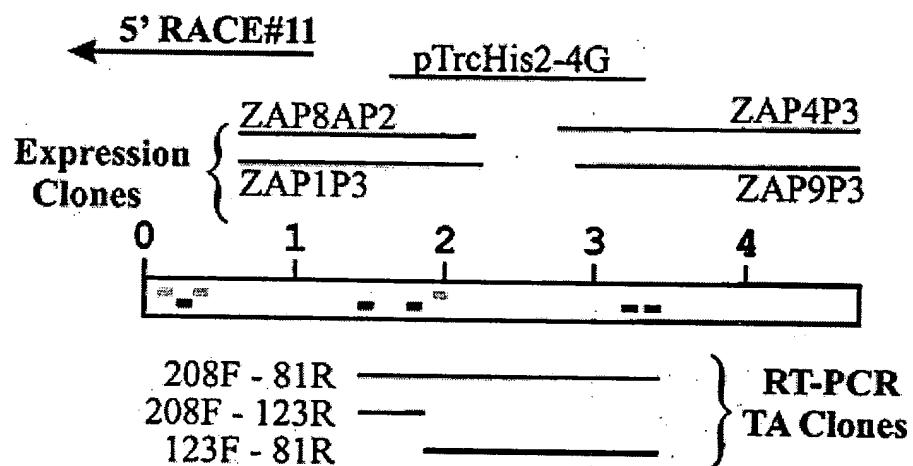


Figure 19



U.S. Patent Application

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Title:

Inventor:

Filed:

April 25, 2001

Paul H. Weigel et al.

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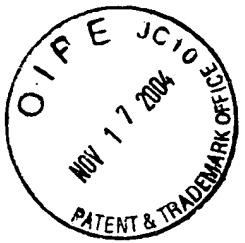
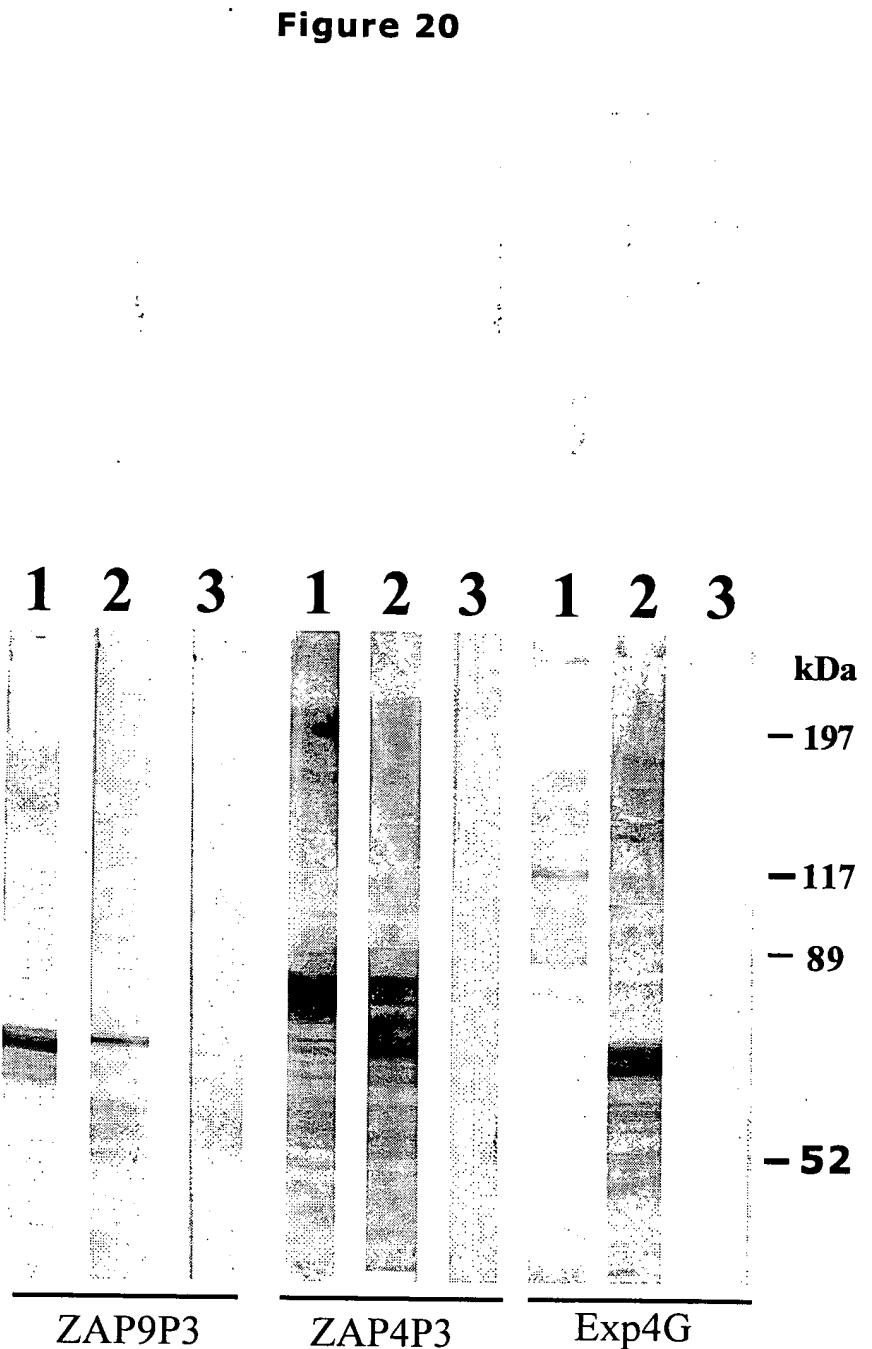
Agent:

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Docket No.:

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FORMAL DRAWINGS



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 Group: 1647
 Examiner: L. Spector

SHEET 21 OF 42 FORMAL DRAWINGS

Figure 21

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U.S. Patent Application

Serial No.:

09/842,930

Title:

HYALURONAN RECEPTOR FOR ENDOCYTOSIS

Inventor:

Paul H. Wigle et al.

Filed:

April 25, 2001

Docket No.:

Kathryn L. Hester, Ph.D.

5820,603

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FORMAL DRAWINGS

Figure 22

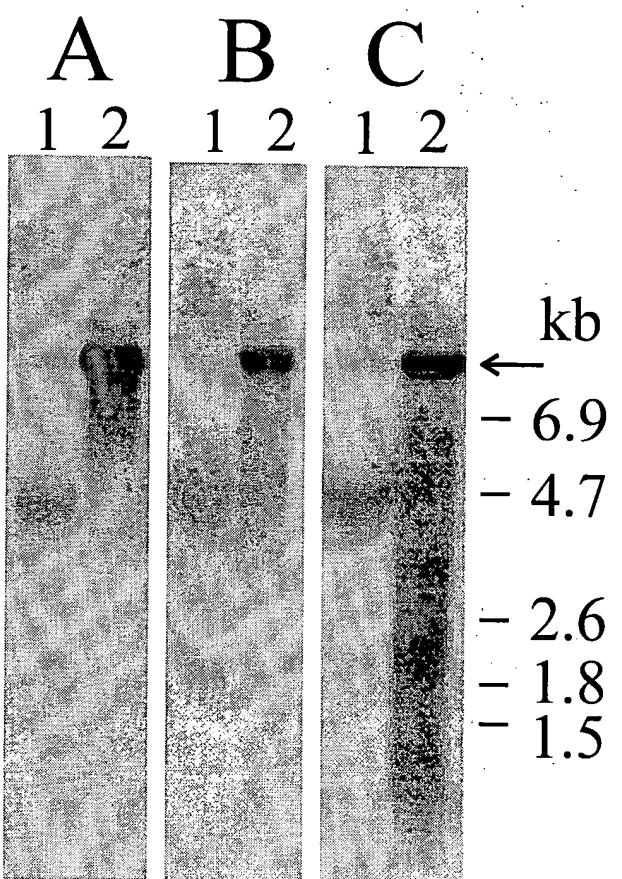
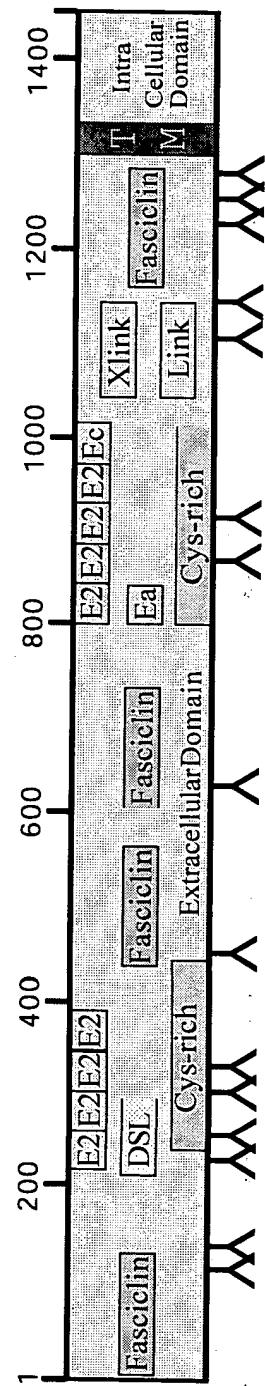
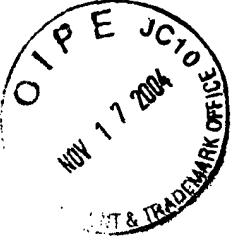


Figure 23





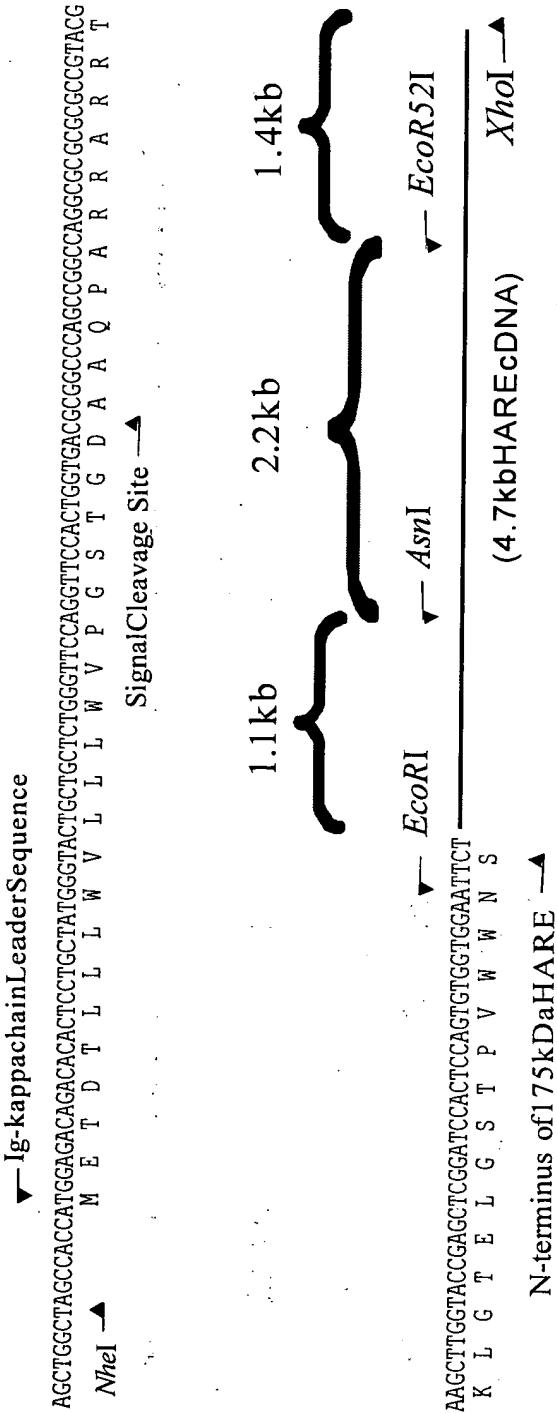
EXPRESS MAIL NO.: EV373446295US DATE DEPOSITED: 11/17/2004
US. Patent Application

Serial No.:

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Inventor: Paul H. Weigel et al. **Group:** 1647
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D. **Examiner:** L. Spector
Docket No. 5820.603

SHEET 24 OF 42 FORMAL DRAWINGS

Figure 24



US. Patent Application

Serial No.: 09/842,930

Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS

Inventor: Paul H. Weigel et al. Group: 1647

Filed: April 25, 2001

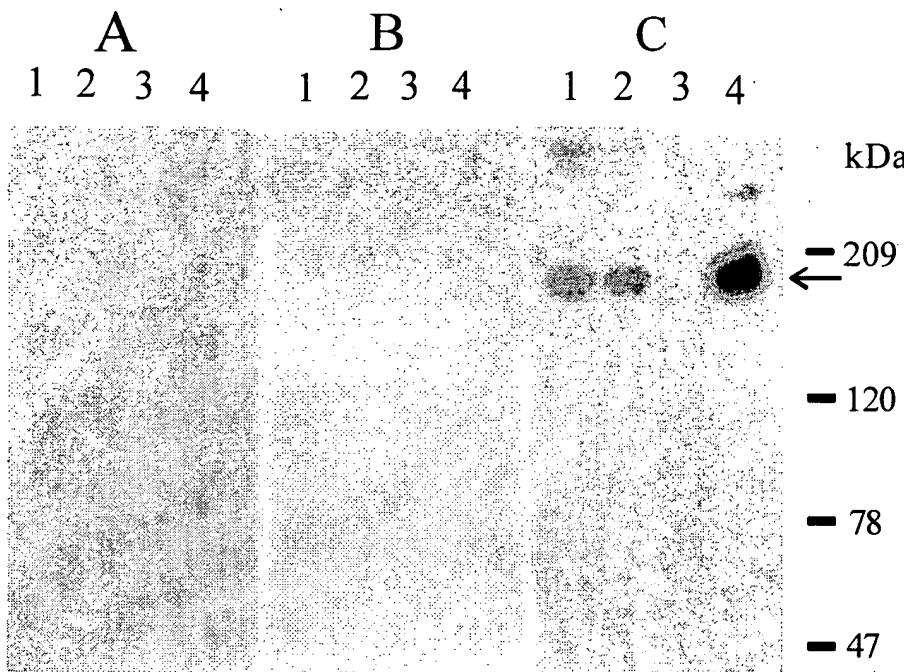
Agent: Kathryn L. Hester, Ph.D.

Docket No. 5820.603

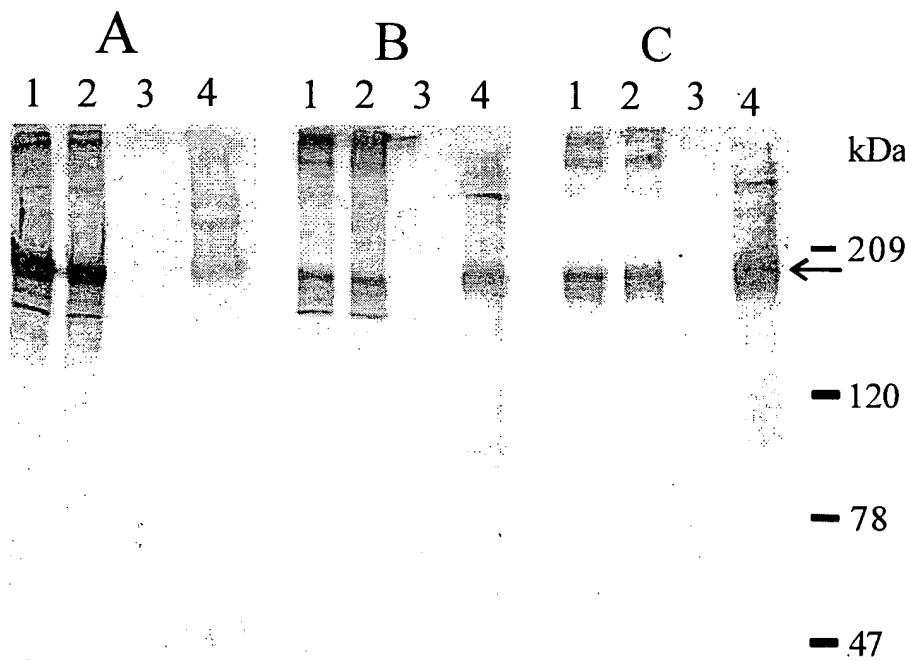
SHEET 25 OF 42 FORMAL DRAWINGS

Figure 25

Autoradiography



Western Blot



U.S. Patent Application

Serial No.:

09/842,930

Title:

HYALURONAN RECEPTOR FOR ENDOCYTOSIS

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Group: 1647

Filed:

April 25, 2001

Agent:

Kathryn L. Hester, Ph.D.

Examiner: L. Spector

Docket No.

5820.603

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FORMAL DRAWINGS

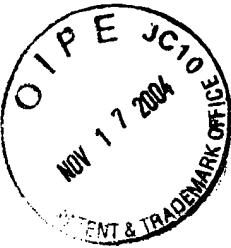
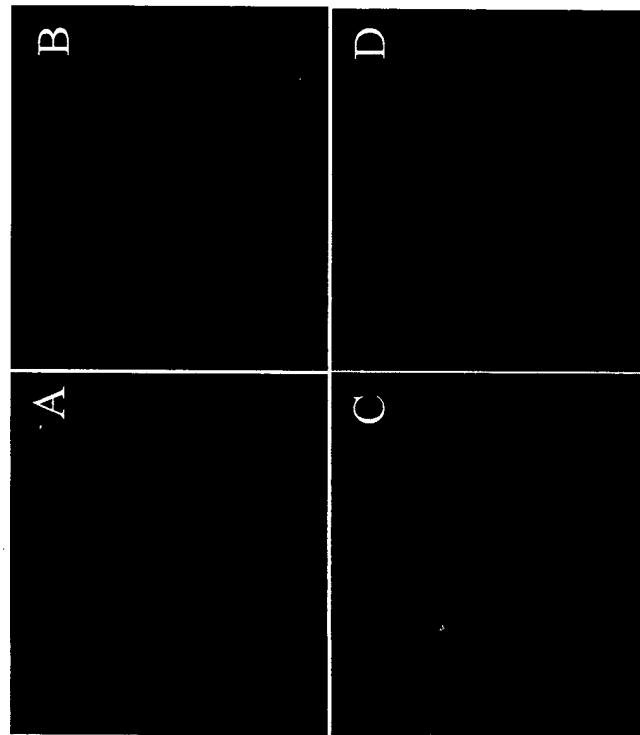


Figure 26



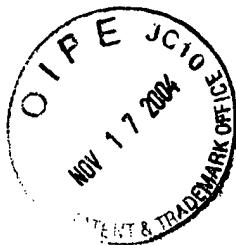
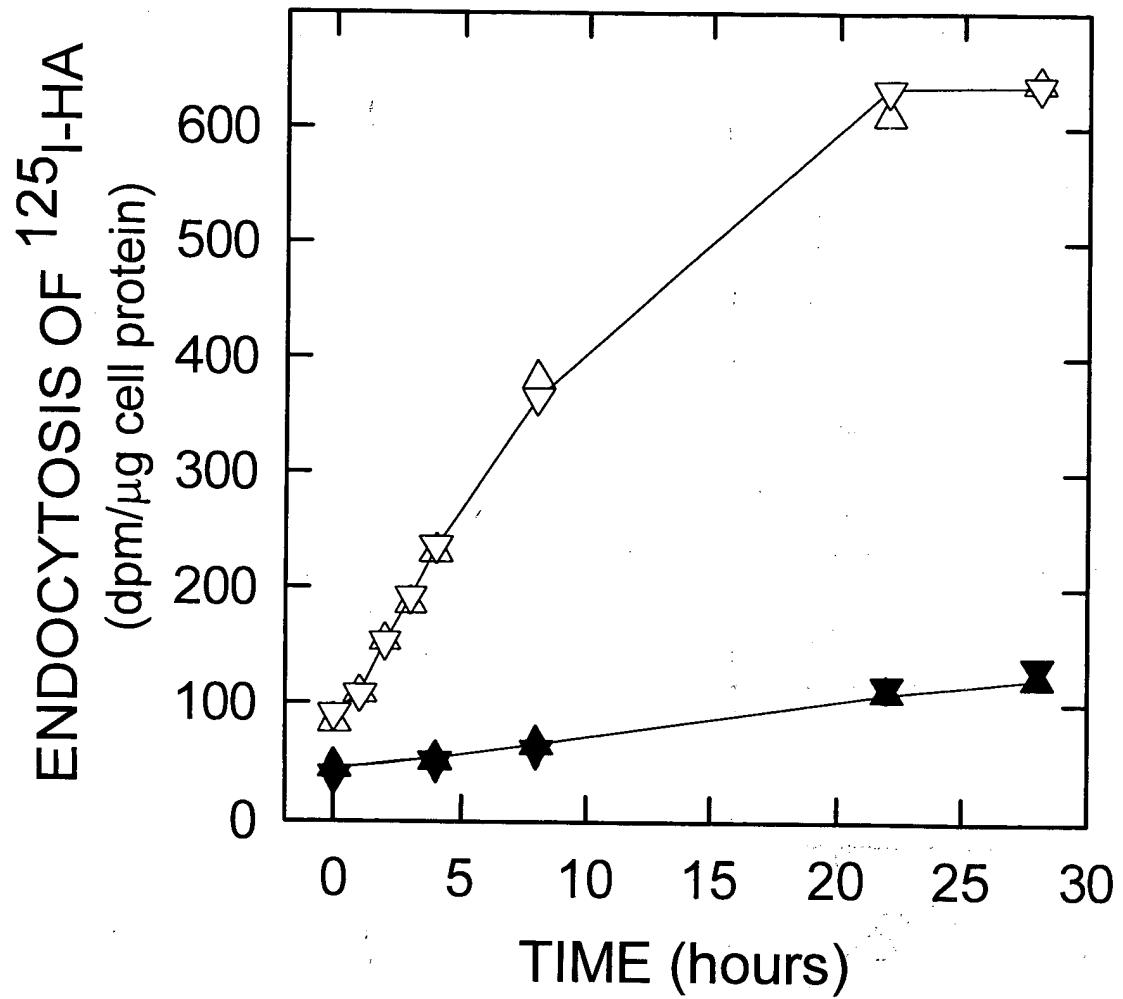


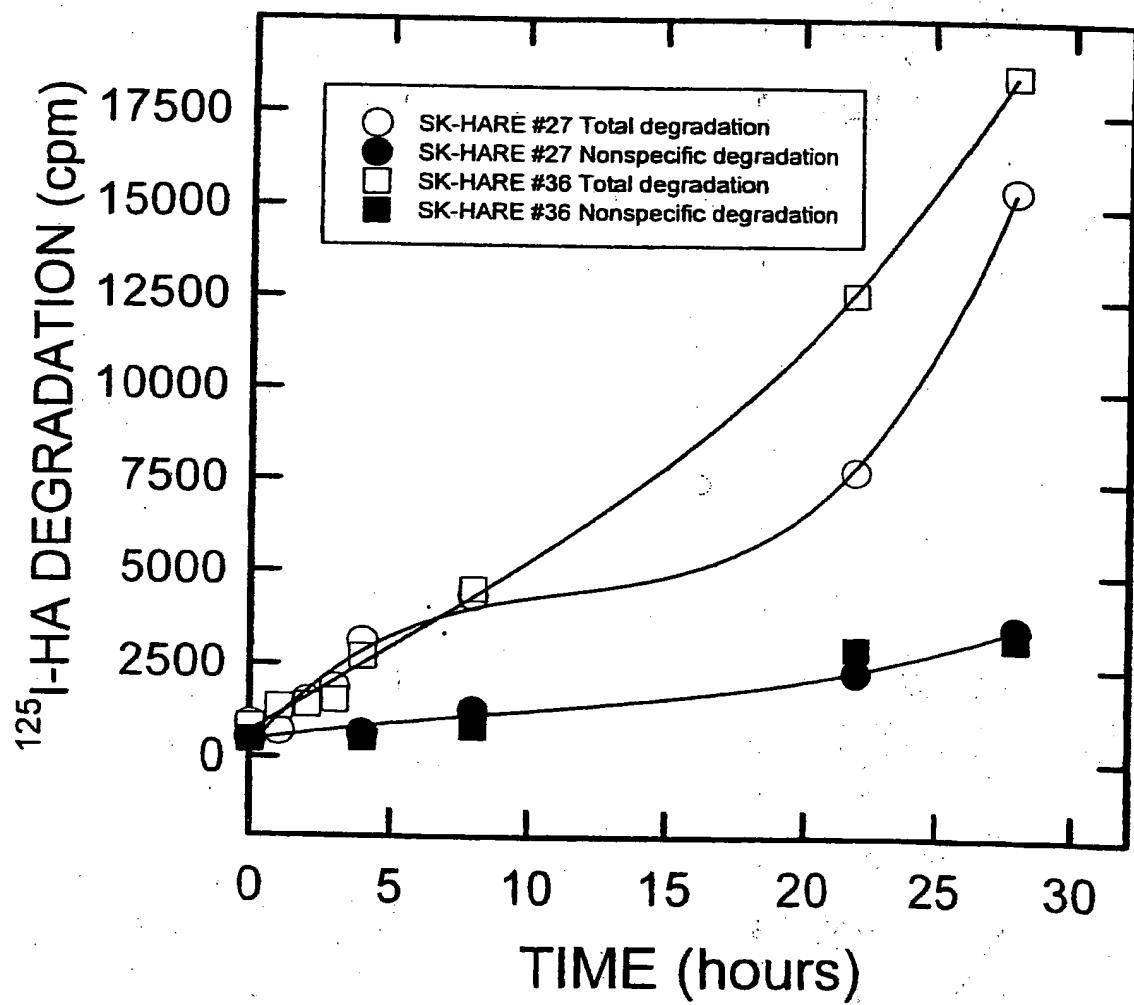
Figure 27A



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U.S. PATENT & TRADEMARK OFFICE

Figure 27B

Degradation of internalized HA by transfected SK-Hep1 cell lines expressing the 175-kDa HARE



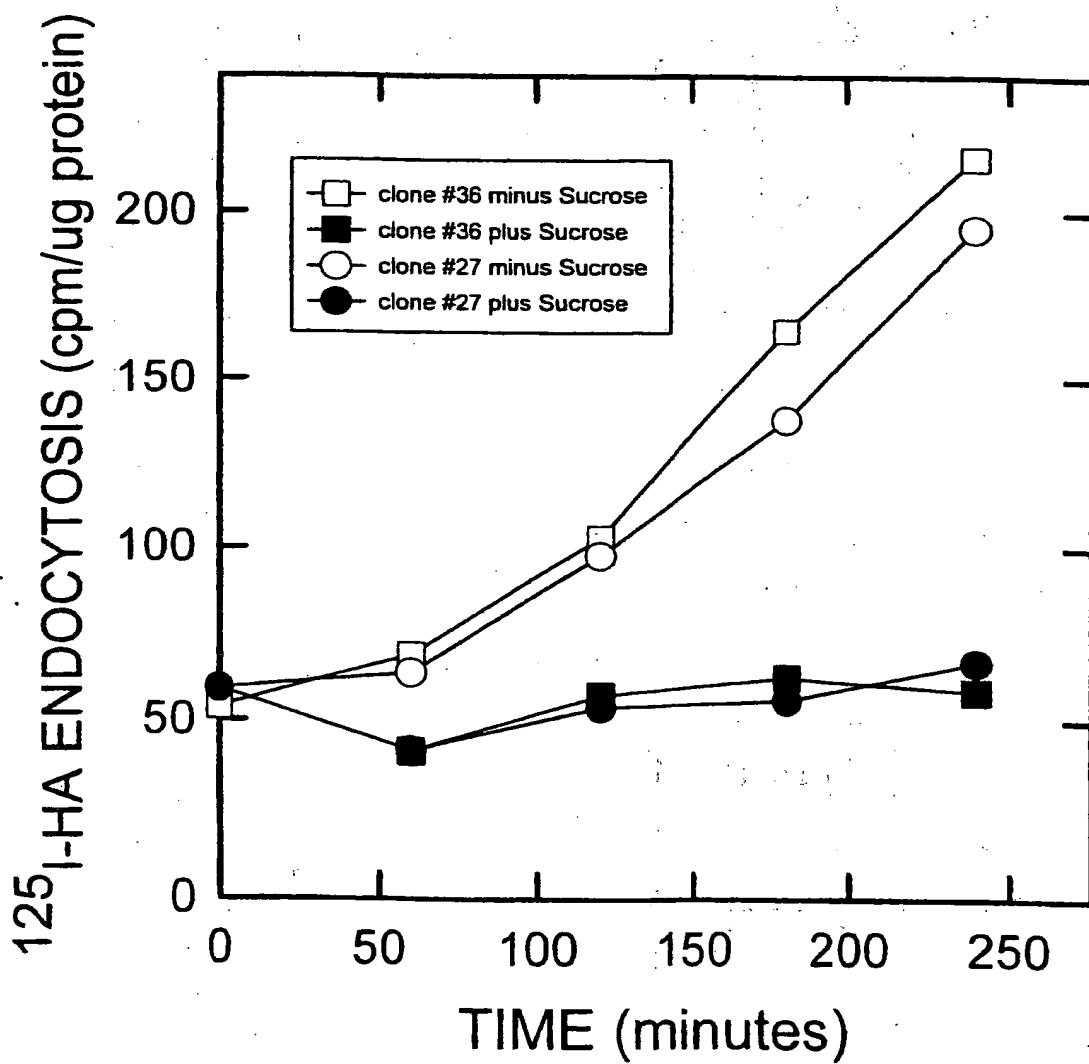
EXPRESS MAIL NO.: EV373446295US DATE DEPOSITED: 11/17/2004
US. Patent Application

Serial No.: 09/842,930
Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS
Inventor: Paul H. Weigel et al. Group: 1647
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D.
Docket No. 5820.603 Examiner: L. Spector



Figure 27C

Hyperosmolarity inhibits HA endocytosis mediated by HARE in transfected SK-Hep1 cells



EXPRESS MAIL NO.: EV373446295US DATE DEPOSITED: 11/17/2004

U.S. Patent Application

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Agent: Kathryn L. Hester, Ph.D.

Examiner: L. Spector

Docket No. 5820.603

SHEET 29 OF 42 FORMAL DRAWINGS

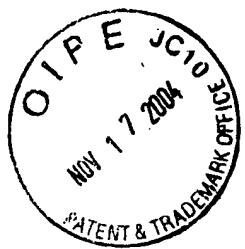
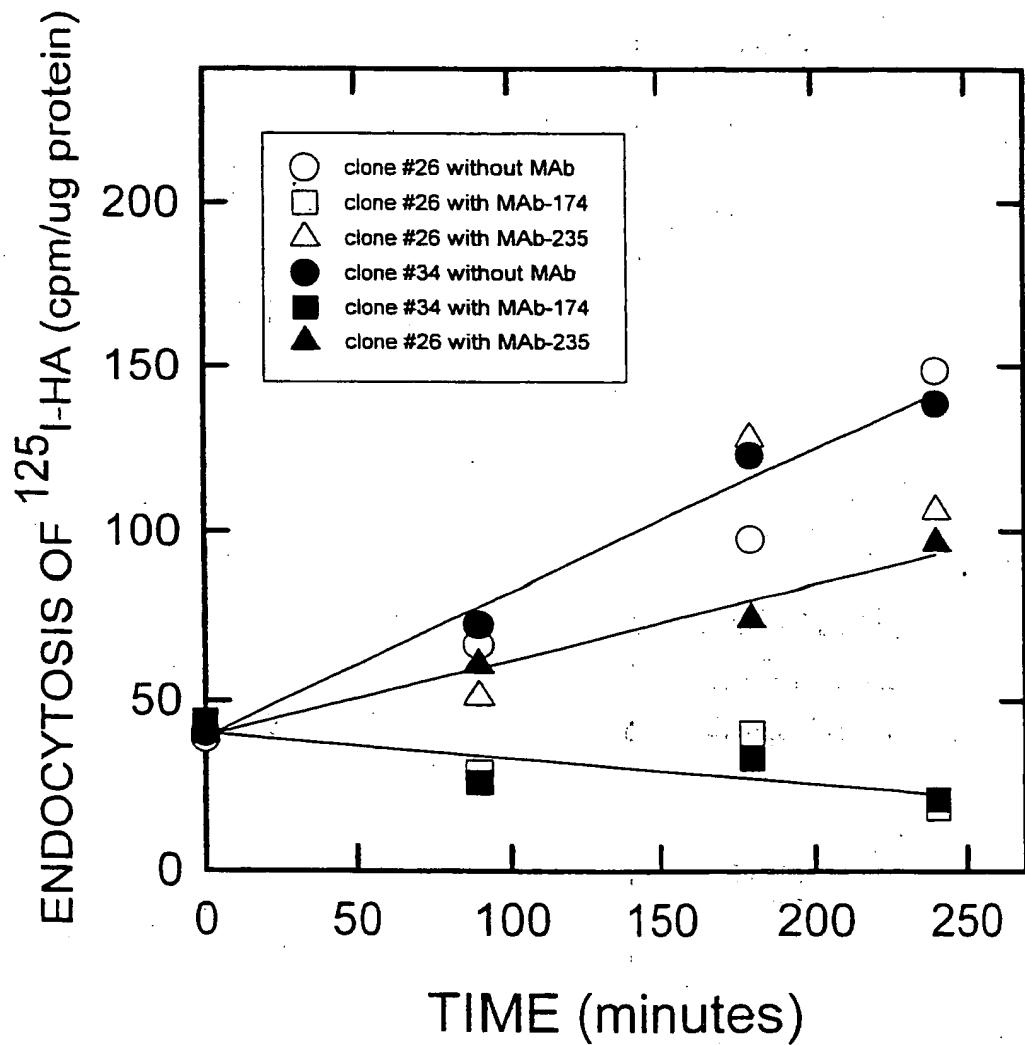


Figure 27D

Specific monoclonal antibodies against HARE inhibit HA endocytosis in SK-Hep1 transfectants expressing the 175-kDa HARE



Serial No.: 09/842,930
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Inventor: Paul H. Weigel et al. Group: 1647
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D. Examiner: L. Sp
602-622

SHEET 31 OF 42 FORMAL DRAWINGS



Figure 28

17SHARE 1 ----- SLPS LLTRLEQMPD YSIFRGYI IH YNLASIESA DAYTVFVPPN EAIENYIREK KATS LKED IL RYHVVLGKEL LKNDLHNGMS RETMLGFSYL
 CAB61827 1111 LHLSQVLLP PRGDVGCGQ LLQQLDLVPA FSLFRELLOH HG LVPQIEAA TAYTIVFPTN RSLEA---QG NSSELADATV RHHVVGEAL SMETLRKGH RNSSLGPBHW
 BAA13377 754 LHLSQVLLP PRGDVGCGQ LLQQLDLV-A FSLFRELLOH HG LVPQIEAA TAYTIVFPTN RSLEA---QG NSSELADATV RHHVVGEAL SMETLRKGH RNSSLGPBHW

 17SHARE 95 LAFFLRNDLQ YVNEAPINYT NVATDKGVH GLERVLEIQK NR DNNNDTII VRGEGLRSQ QAFPLLETKP LRETRK- DLY SIYEMGRKRSV FIGOPQWV TIITRAWIA
 CAB61827 1218 IVFVNHSGQP EVNVPVLEG MLEAPRSLSI GLSGVLTIVGS SMLSHSHA LRENGVNTSH RFTQGQFOL QUTPRKSVY RSGFNSFSR- -GSYTFAR KIQVPCPCG
 BAA13377 861 IVFVNHSGQP EVNVPVLEG MLEAPRSLSI GLSGVLTIVGS SMLSHSHA LRENGVNTSH RFTQGQFOL QUTPRKSVY RSGFNSFSR- -GSYTFAR KIQVPCPCG

 17SHARE 204 SLAHNAKPAK GEVK-MALG TASVWDGVNG TGTCAGLGF NGTAETTE GKYGIEHDQA STVHGRQO GPLGDS D DVGWRGVND MEITTDONGN THETSANGL
 BAB15793 1 W HLGWS-DG TGVCBEGEFG SGTAEETTE GKYGIEHDQA STVHGRQO GPLGDS D DVGWRGVND MEITTDONGN THETSANGL
 CAB61358 1

 CAB61827 1224 FFGLCIEPCP GGLGGVS-G HGQCCDFRLG SGECHHG EGTAEVEL GRYPNPTGV DLAHGIQE GLQGDGS D NVWGQCLND QKITSPOCPA KDPNANVQ
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 BAB15793 90 NSDGTAS AAGFQGNGTI STAINAETIS NGGISTKAD KRTTPGCRV VPKAGYTDGD IVLEINPL ENHEGODRNA BTOTGPQNA VNLPLATTG DG-KVTLIN
 CAB61358 3 EAVGTSAS AAGFQGNGTI STAINAETIS NGGISTKAD KRTTPGCRV VPKAGYTDGD IVLEINPL ENHEGODRNA BTOTGPQNA VNLPLATTG DG-KVTLIN
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 BAA13377 1076 DSAGASTK AAGYSGNGIF SEVDEPHAHG HGGSPHAN TKVAPQRTN TQDGYMGDG ELCQEINSL IHHGCHIEA BPTPQPVQ SVSREGYSG DGIRESLDL

 17SHARE 422 VLTNNGGS PFAIENYTEQ DQRITKPD Y-TGDDIVLR GSIFYGLPKN PSTSQYFFQ QEHAVRELAG PGPFITVFAP- LSSSFNHE PRIKDWDQG IMSPQVLRYHV
 BAB15793 199 VLTNNGGS EFAIENYNTQ VERTKPN Y-IDGDFTR GSIFYQELPKN PKTSQYFFQ QEHFVVDLIVG PGPFITVFAP- LSAAFDDE ARVWDWDRYK IMPQVLRYHV
 CAB61358 112 VLTNNGGS EFAIENYNTQ VERTKPN Y-IDGDFTR GSIFYQELPKN PKTSQYFFQ QEHFVVDLIVG PGPFITVFAP- LSAAFDDE ARVWDWDRYK IMPQVLRYHV
 AAC82398 1

 CAB61827 1543 PSKNNNGS PYATKSTGD GQRTTIDTA HTVGDGLTR ARVGLELLRD KHAS--FFSL RLLEYKELKG DGPFTIVPH ADLMSNLSQD ELARIRAHQ L--VFRYHV
 BAA13377 1186 PSKNNNGS PYATKSTGD GQRTTIDTA HTVGDGLTR ARVGLELLRD KHAS--FFSL RLLEYKELKG DGPFTIVPH ADLMSNLSQD ELARIRAHQ L--VFRYHV

 17SHARE 528 VCAHQILLEN LKLVISNATL QGEPIVISVS QDTVFINNKA KVLLSDIIST NGVHIIIDKL LSPKNLLITP KDALGRVLQN LTTVAANHGY TKFSKLIQDS GLLSVITDOSI
 BAB15793 305 VCAHQILLEN LKLVISNATL QGEPIVISVS QSTVYINNKA KIISSDIIST NGVHIIIDKL LSPKNLLITP KDNSGRILQN LTTLANTNNGY IKFSNLIQDS GLLSVITDPI
 CAB61358 218 VCAHQILLEN LKLVISNATL QGEPIVISVS QSTVYINNKA KIISSDIIST NGVHIIIDKL LSPKNLLITP KDNSGRILQN LTTLANTNNGY IKFSNLIQDS GLLSVITDPI
 AAC82398 10 VCAHQILLEN LKLVISNATL QGEPIVISVS QSTVYINNKA KIISSDIIST NGVHIIIDKL LSPKNLLITP KDNSGRILQN LTTLANTNNGY IKFSNLIQDS GLLSVITDPI
 CAB61827 1648 VCAHRRLSED LLEQGYATL SGHPLFRSER EGSIYLNDA RVVSDSHHEA NGILEHIDR LLPEALHWE PDDAPIPRN VTAAAQGFGY KIFSGLLKVA GLPLLIREAS
 BAA13377 1291 VCAHRRLSED LLEQGYATL SGHPLFRSER EGSIYLNDA RVVSDSHHEA NGILEHIDR LLPEALHWE PDDAPIPRN VTAAAQGFGY KIFSGLLKVA GLPLLIREAS

 17SHARE 638 HTPVTFWPT DKAELALPPE QDQFLFNQDN KDKLKSYLKF HVRDLSKALA SDLERSASWV TLQGSELSVR GIGTSDFGEL FLNEQDFRI HRLGLFDGV AGIDQLLMN
 BAB15793 415 HTPVTFWPT DQALEALPPE QDQFLFNQDN KDKLKSYLKF HVRDALKVIA VDLPTS TAWK TLQGSELSVK GAGRDIQDL FLNGQDFRIV QRELLFDLGV AGIDQLLID
 CAB61358 320 HTPVTFWPT DQALEALPPE QDQFLFNQDN KDKLKSYLKF HVRDALKVIA VDLPTS TAWK TLQGSELSVK GAGRDIQDL FLNGQDFRIV QRELLFDLGV AGIDQLLID
 AAC82398 120 HTPVTFWPT DQALEALPPE QDQFLFNQDN KDKLKSYLKF HVRDALKVIA VDLPTS TAWK TLQGSELSVK GAGRDIQDL FLNGQDFRIV QRELLFDLGV AGIDQLLID
 CAB61827 1758 HRPFITMLWPT DAAFRALPPD RQAWLYHEDH RDKLAAILRG HMIRNVEALA SDLPNLGPIN TMHGTPISFS SRTRP-GEL MVGEDDARIV QRHLPFEGGL AGIDQLLEP
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 17SHARE 748 PTLGGRCDFT TTFDIP-GEI GSISIFTPKP LKS PKPGVKK R- IY-----NPLPT R-----RNVE- G QNITVVIQF PFRGEGYFMP DQAPGFPD
 BAB15793 525 PTLGGRCDFT TTFDAS-GEI GSIVNTPS P RWS PKPGVKK R- IY-----N-LPT K-----RNLE- G REPSLVIQI PFRGEGYFGR DQAPGFPD
 CAB61358 438 PTLGGRCDFT TTFDAS-GEI GSIVNTPS P RWS PKPGVKK R- IY-----N-LPT K-----RNLE- G REPSLVIQI PFRGEGYFGR DQAPGFPD
 AAC82398 230 PTLGGRCDFT TTFDAS-GEI GSIVNTPS P RWS PKPGVKK R- IY-----N-LPT K-----RNLE- G REPSLVIQI PFRGEGYFGR DQAPGFPD
 CAB61827 1867 PGLGARDHF ETRPLRINT SIEGLEPP E EGSGEQQSP E AWRFYPKEW TSPPHLHSIL RSVWVHPSLW GRPQGLGRG HRM VTTTWK PSVPGHYGS DQAPGPGS
 BAA13377 1510 PGLGARDHF ETRPLRINT SIEGLEPP E EGSGEQQSP E AWRFYPKEW TSPPHLHSIL RSVWVHPSLW GRPQGLGRG HRM VTTTWK PSVPGHYGS DQAPGPGS

 17SHARE 833 TPNNNRGMER DLYTPMGC LHTGFGNTA ELMWHGRGP DOPRS SIE GHGDEGTGGS GQIETGWT AAS DPTTAV FAVVTPASV HAIIKENNTI VNLNYEGDDG
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 CAB61358 522 APNNRGMER DQYSATEGEK NTGFGNTA EMWPGRGP DOPCPSDIE GHGDEGTGGS GQIETGWT GPSDQTOAVL PAVVTPPSA HAIIKENNTI PNLD YEGDDG
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 BAA13377 1620 SPDSRGVM DMGMSGQCL ERSGFAGTA ELMAPGAFGP HQOACR-TVW GRGDEGGGS GSPDEGWT GPRGEVQEL QVCTPPAP EAVVAGNS DLSLG YEGDDG

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 BAB15793 719 INTVVDERK QDNGCERKVA RISQKGTQVS SSKQGYKGD GHSTIEIDE ADGLNGQHIE HATKMTGPG XHIIKSHY VGDGVIC-EP EQLPIDR LQ DNGC HADAK
 CAB61358 632 INTVVDERK QDNGCERKVA RISQKGTQVS SSKQGYKGD GHSTIEIDE ADGLNGQHIE HATKMTGPG XHIIKSHY VGDGVIC-EP EQLPIDR LQ DNGC HADAK
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 17SHARE 1052 DADLYQDTT VGVFHLSRPL QGYKLTDFKA KEA AKEAAT IATYNQLSY QAKEYHIS A GWLESGRVAY PTTYASQKING ANVVGIVDYG S.RANKS EMWD VEYMMKDVN
 BAB15793 828 VDLDHFQDTT VGVFHLSRPL QGYKLTDFKA KEA AKEAAT MATYNQLSY QAKEYHIS A GWLETGRVAY PTAFAQSNG SGGVIVDYG PPNKSEMWD VEYMMKDVN
 CAB61358 741 VDLDHFQDTT VGVFHLSRPL QGYKLTDFKA KEA AKEAAT MATYNQLSY QAKEYHIS A GWLETGRVAY PTAFAQSNG SGGVIVDYG PPNKSEMWD VEYMMKDVN
 AAC82398 533 VDLDHFQDTT VGVFHLSRPL QGYKLTDFKA KEA AKEAAT MATYNQLSY QAKEYHIS A GWLETGRVAY PTAFAQSNG SGGVIVDYG PPNKSEMWD VEYMMKDG-
 CAB61827 2197 TDQHDFQERK AGVFHLQATS GPYGLNFSEEA EAALQAGQAV LASFPQLSAA QQLGFHISL GWLANGSTAH PVFVPADEG NGRGVVSLG ARKNSL ERWD AFTR VODVA
 BAA13377 1840 TDLDHFQERK AGVFHLQATS GPYGLNFSEEA EAALQAGQAV LASFPQLSAA QQLGFHISL GWLANGSTAH PVFVPADEG NGRGVVSLG ARKNSL ERWD AFTR VODVA

 17SHARE 1162 SKAGYVGD GFS-SGNLL QVLMSPSLT NFLTEVLAFS KSSARGQAFL KHITDLSIRG TLFVQPNQSL PGNKSLSGRD IEEHLLTNVN SFYNDLVTNGT FIRTMIGSQL
 BAB15793 938 SKAGYVGD GFS-SGNLL QVLMSPSLT NFLTEVLAFS NSSARGAFL EHLITDLSIRG TLFVQPNQSL GENETLSGRD IEEHLLANVSM FYYNDLVTNGT TQTRLGSKL
 CAB61358 849 ----- SAGFL QOLSPRCIS R----- TPDDLSIRG TLFVQPNQSL GENETLSGRD IEEHLLANVSM FYYNDLVTNGT TQTRLGSKL
 AAC82398 643 SKAGYVGD GFS-SGNLL QVLMSPSLT NFLTEVLAFS NSSARGAFL EHLITDLSIRG TLFVQPNQSL GENETLSGRD IEEHLLANVSM FYYNDLVTNGT TQTRLGSKL
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 BAA13377 1950 SKRNGFVGD GISTENGKLL DVLATAANFS TFYGMILIGYA NATQRLDPL DFLLDELTYK TLFVQVNQEF VDNMTLSPD LELEASNATL LSAN-ASQK LLPASHGSL

 17SHARE 1271 LITFS---QD LHLQH-ETRFV DGRSLIQLQWDI IAANGILHII SEPLRAPPATA ATA--AHSQ LSTGCFCAV LVTGAIAT- L AYJSYFRFQ RTTG- FOEF DOKRTLMSWL
 BAB15793 1047 LITAS---QD PLQPTETRFV DGRSLIQLQWDI FASNGIHHVI SRLPKAPPAP VTL---THTG LGAGIFFAI LVTGAVA- L AYJSYFRFQ RTTG- FOEF ESEEDINVAA
 CAB61358 924 LITAS---QD PLQPTETRFV DGRSLIQLQWDI FASNGIHHVI SRLPKAPPAP VTL---THTG LGAGIFFAI LVTGAVA- L AYJSYFRFQ RTTG- FOEF ESEEDINVAA
 AAC82398 752 LITAS---QD PLQPTETRFV DGRSLIQLQWDI FASNGIHHVI SRLPKAPPAP VTL---THTG LGAGIFFAI LVTGAVA- L AYJSYFRFQ RTTG- FOEF ESEEDINVAA
 CAB61827 2416 IISDAGPDS SWAPVAGTV VSVRIIWDI MAFNGIHAL ASPLIAPPQ OQAVIALEAPP VAAGY--GAV LAAGALLGV AGAIIYLRAK KPTGFCFSAF OAEDDADDF
 BAA13377 2059 IISDAGPDS SWAPVAGTV VSVRIIWDI MAFNGIHAL ASPLIAPPQ -AVLAPEAPP VAAGY--GAV LAAGALLGV AGAIIYLRAK KPMGFCFSAF OAEDDADDF

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 BAB15793 1147 LGKQOPENIS NPLY-ESTTS APPPEPSYDF TDS EER---- QLEGNDFP LRTL
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 CAB61827 2524 SPWQ-EGTN- PTLVSVPNP FGSDTFCFP DD----- SLL EEDFPD TQRLTVK----
 BAA13377 2166 SPWQ-EGTN- PTLVSVPNP FGSDTFCFP DD----- SLL EEDFPD TQRLTVK----

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 CAB61358 1024 LGKQOPENIS NPLY-ESTTS APPPEPSYDF TDS EER---- QLEGNDFP LRTL
 AAC82398 852 LGKQOPENIS NPLY-ESTTS APPPEPSYDF TDS EER---- QLEGNDFP LRTL
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 BAA13377 2166 SPWQ-EGTN- PTLVSVPNP FGSDTFCFP DD----- SLL EEDFPD TQRLTVK----

Serial No.:

09/842,930

Title:

HYALURONAN RECEPTOR FOR ENDOCYTOSIS

Inventor:

Paul H. Weigel et al.

Group: 1647

Filed:

April 25, 2001

Agent:

Kathryn L. Hester, Ph.D.

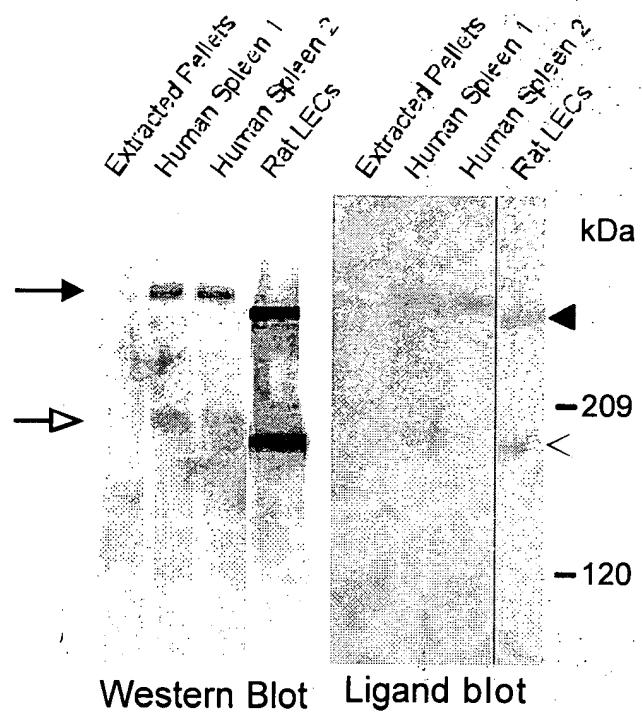
Examiner: L. Spector

Docket No.

5820.603

SHEET 32 OF 42

FORMAL DRAWINGS

Figure 29

U.S. Patent Application

Serial No.: 09/842,930

Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS

Inventor: Paul H. Weigel et al. Group: 1647

Filed: April 25, 2001

Agent: Kathryn L. Hester, Ph.D. Examiner: L. Spector

Docket No. 5820.603

SHEET 33 OF 42 FORMAL DRAWINGS

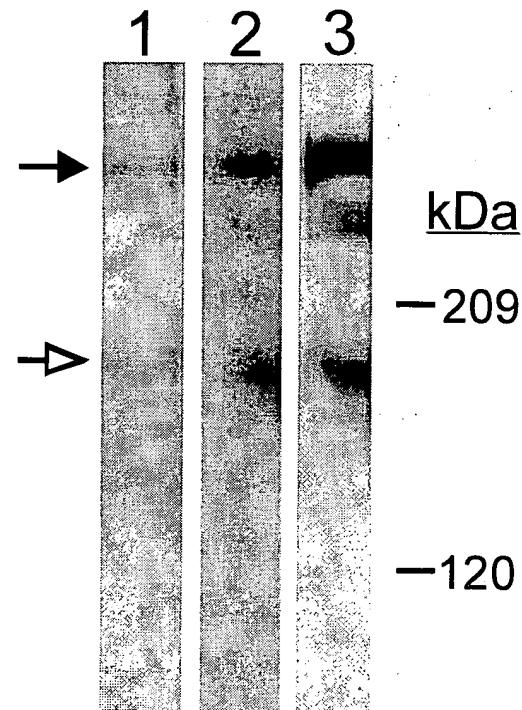
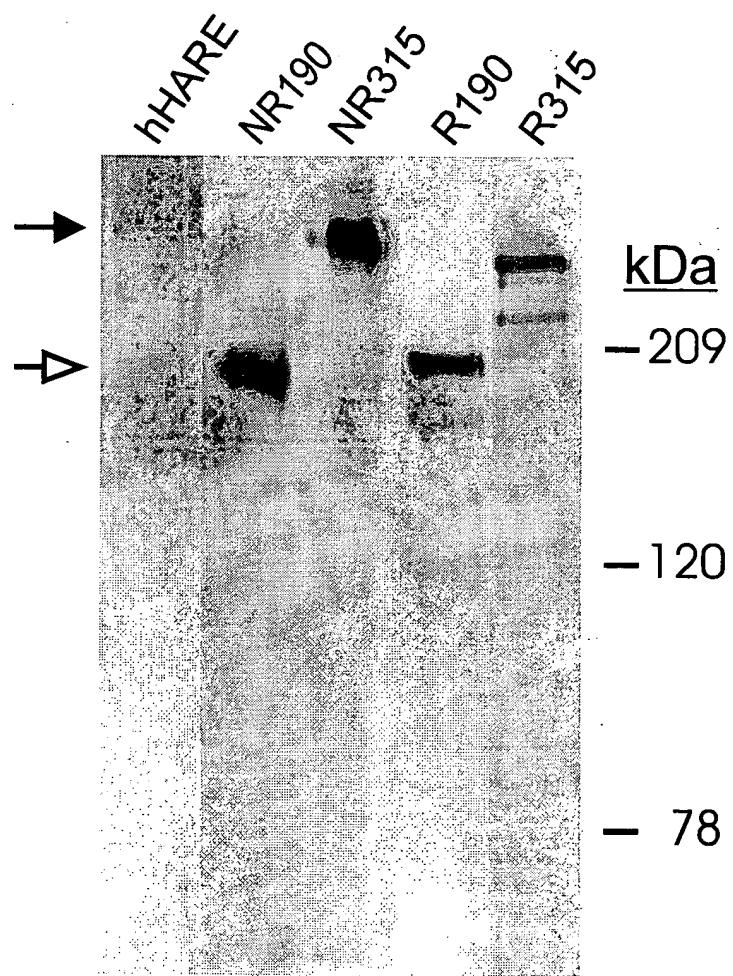
Figure 3 0



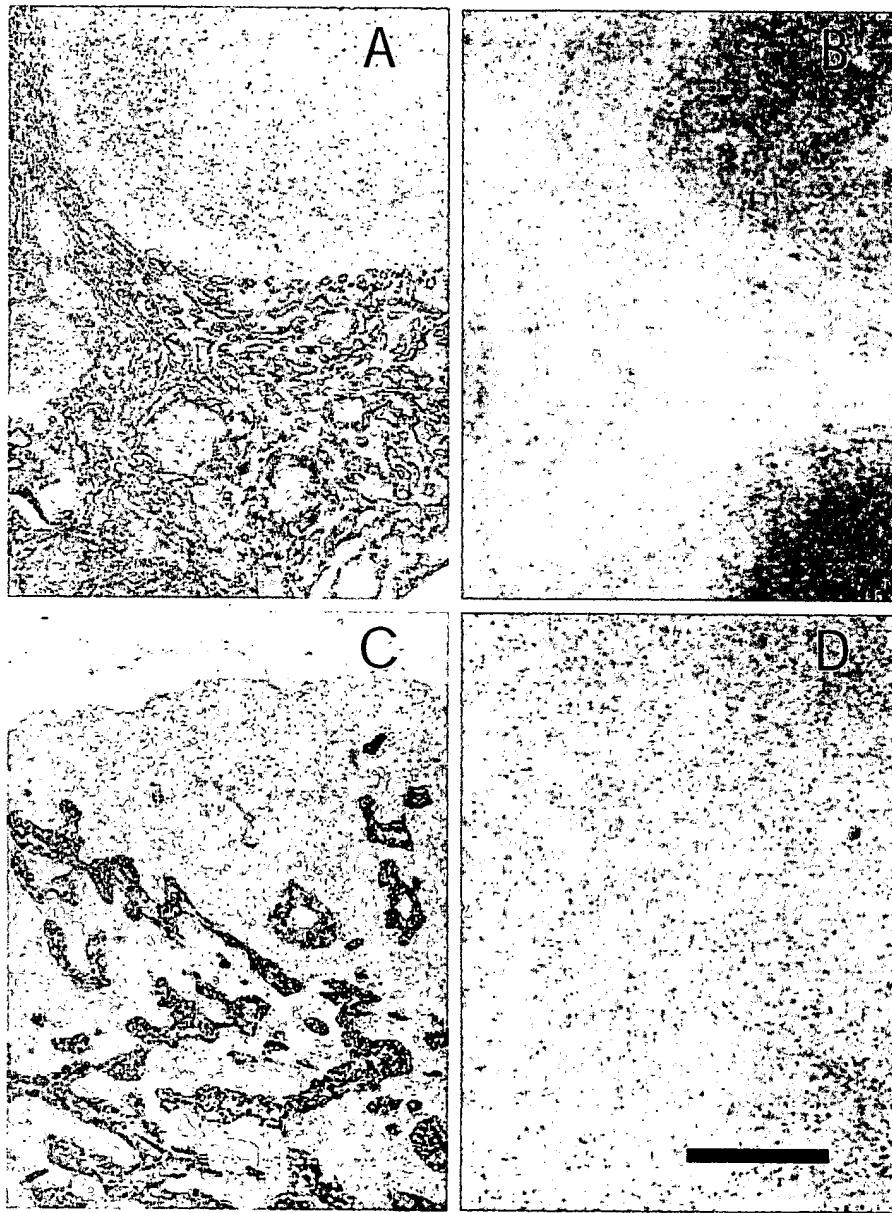
Figure 31



Serial No.: 09/842,930
Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS
Inventor: Paul H. Weigel et al. Group: 1647
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D.
Docket No. 5820.603
Examiner: L. Spector

SHEET 35 OF 42 FORMAL DRAWINGS

Figure 3 2



US. Patent Application

Serial No.: 09/842,930
 Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS
 Inventor: Paul H. Weigel et al. Group: 1647
 Filed: April 25, 2001
 Agent: Kathryn L. Hester, Ph.D.
 Docket No. 5820.603
 Examiner: L. Spector

SHEET 37 OF 42

FORMAL DRAWINGS

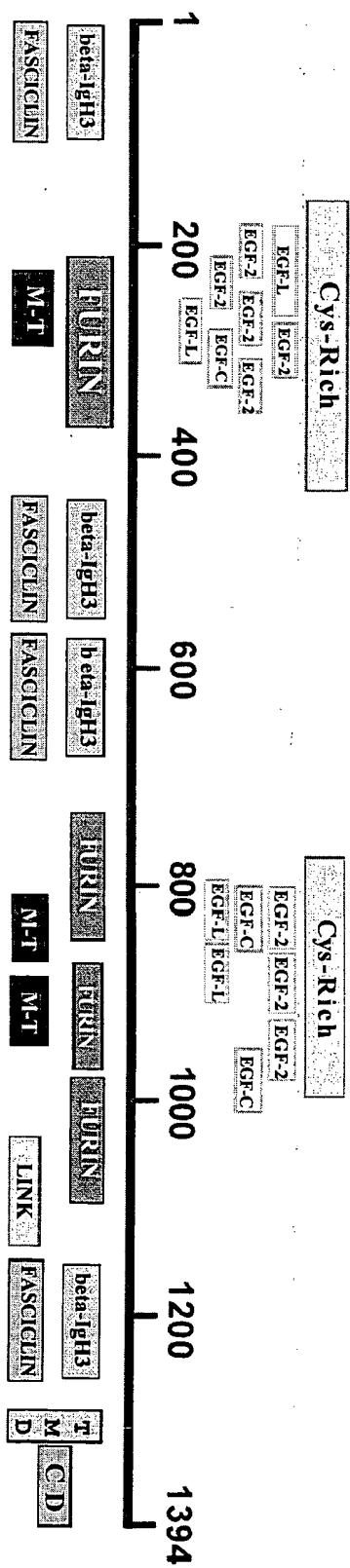


Figure 34

Serial No.: 09/842,930
Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS
Inventor: Paul H. Weigel et al.
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D.
Docket No. 5820.603

Examiner: L. Spector
SHEET 38 OF 42 FORMAL DRAWINGS

Figure 35

hHARE 1 I QYNLANAIAEADAYTFAP NNAIENYIREKKVLSLEED VLRYHVLEEKLLKNDHNG MRETMIGFSYFLSFLHND QLYVNEAPIN ~~N~~ IN VATDKGV
rHARE 23 I HYNLASAIESADAYTFVP NNEAIENYIREKKATSLKD ILRYHVVLGEKLKNDHNG MRETMIGFSYLLAFFLND QLYVNEAPIN ~~N~~ IN VATDKGV

hHARE 101 I HGLGKVLEIQLK ~~N~~ DNDL TIRGRRTSSELT~~E~~PFGT KSLGNKRR~~E~~ITYSFMGRR TFIGQPK~~E~~VRTVITREC AGFFGPOCOPCPGNAONVCE
rHARE 123 IHGLEKVLEIQLK ~~N~~ DNDL TIVRGEGK~~E~~SQQAPPLET KPL-RTRK~~E~~LYSIYEMGKR SVTIGQPK~~E~~VRTVITRAW LASLAHNAPPGEVKCAL

hHARE 201 GNGICLDGVANGIGVEFEGEG FSGTAEETTEGKYGIHDQ ASVHGR~~E~~QGPLGDGSID DVGWRGVK~~E~~DMEITTDN~~E~~N GHTSAN~~E~~LTSNTSDGTASK
rHARE 222 GTASVWDGVNGTGTQGIG FNGTAEETTEGKYGIHDQ ASVHGR~~E~~QGPLGDGSID DVGWRGVK~~E~~DMEITTDN~~E~~N GHTSAN~~E~~LTSNTSDGTASK

hHARE 301 ~~S~~AAGFOGNGTETTAINAETI SNGG~~E~~SAKAD~~E~~KRITTPGRRV TIKAGYTGDDGIVIENP LENHGGEDKNAETTQTPGNO AATN~~E~~LPAYTDGKV~~E~~TLLN
rHARE 322 ~~S~~AAGFRGNGTETTAINAET SNGG~~E~~STKAD~~E~~KRITTPGRRV TIKAGYTGDDGIVIENP LENHGGEDKNAETTQTPGNO AATN~~E~~LPAYTDGKV~~E~~TLLN

hHARE 401 VLTTKNGG~~E~~SEFAI~~E~~Q VERTT~~E~~CKPNYIGDGETERG STYQELPKNPKTSQYFFQLO EHFVKDLVSPGPFTVEAPLS AAFDEEARVKDWKDYGLMPQ
rHARE 422 VLTNNNGG~~E~~SPFAF~~E~~Q DQRIN~~E~~TPKPDYTGDDIV~~E~~RG SIYGELPKNPSTSQYFFQLO EHAVRELAGGPGETVEAPLS SSEFHNEPRIKDWDQQGLMSQ

hHARE 501 VLRYHVVA~~H~~OLLENKL~~I~~ SNATSLQEPITISVSOSTV YINNKAKIISDIISTNGIV HIIKLLSPKNLLITPKDNS GRILQNETLATNNGYIKFS
rHARE 522 VLRYHVVG~~E~~QOLLLDNLKVT TSAT~~E~~LOGEPSISVSQDTV FINNEAKVLSDISTNGVI HVTDKLSPKNLLITPKDAL GRV~~E~~QNETTVANHGYTKFS

hHARE 601 NLIQDSSL~~I~~SVITDPIHTPV TLFWPTDQALHALPAEQQDF LENQDNKDKLKEYLKHFVIR DAKVLAVIDPLISTAWKTLQG SELSVK~~E~~GAGRIGDGLFLNG
rHARE 622 KLIQDSSL~~I~~SVITDSIHTPV TWFWPTDQALHALPAEQQDF LENQDNKDKLKS~~E~~YLFHVIR DSKALASDIPRSASWKTQ~~E~~LG SELSVR~~E~~GTSIDI~~E~~GFELNE

hHARE 701 QT~~E~~TRIVORELLEDIGVAYGI DLLIDPTIGG~~E~~DFTTFD ASGE~~E~~GG~~E~~VNTPSU~~E~~PRWSKP KGVKQK~~E~~LYN-LPKKRNLLEG RERESLVIQIPR~~E~~KGYFG
rHARE 722 QM~~E~~REFIHRGLLFDVGVAYGI DLLMNPTIGG~~E~~DFTTFD IPGEFGS~~E~~IFTPK~~E~~PLKSKP KGVKKK~~E~~LYNPLPFRNVEG QNLITVVIQTPR~~E~~KGYFM

hHARE 800 RD~~E~~QAPGGDPD~~E~~NNRGM~~E~~ LDQYSATGEK~~E~~KNJINGNGHA SEMMPGRGFD~~E~~LLRCG~~E~~SD HGQ~~E~~DDGITSGQ~~E~~LTETGW TGPS~~E~~DTQAVLPAV~~E~~TPPS
rHARE 822 P~~E~~QAPGGDPD~~E~~NNRGM~~E~~ RDLVTPMGQ~~E~~LTETGW~~E~~ HGG~~E~~DEGITSGE~~E~~LTETGW TAASS~~E~~DTPTAVF~~E~~TPPS

hHARE 900 AHA~~E~~TKENNE~~E~~ENLDYEGD GIT~~E~~TVVDF~~E~~KODNGGAKY AR~~E~~SOKGKVS~~E~~SKQGYKG DGH~~E~~STEIDP~~E~~ADGLNGGCH EHAT~~E~~KMTGPKHK~~E~~JEKSH
rHARE 922 VHAT~~E~~TEENNE~~E~~VNLYEGD GIT~~E~~TVVDF~~E~~KONNGGAKY AK~~E~~SOKGTOVS~~E~~SKQGYKG DGYS~~E~~TEIDP~~E~~ADGVNGGCH EHAT~~E~~RMTGPKHK~~E~~JEKSH

hHAR 1000 YVGDLN~~E~~PEPEQLPDR~~E~~Q DNGQ~~E~~HADAK~~E~~VDLHFQDTT VGFHRLSRPLQQYKLT~~E~~DKA REAGANEATMAYNQSYA OKAYHL~~E~~SAGWLETGRVAY
rHARE 1022 YVGDLGVD~~E~~PEPEQLPLDR~~E~~Q DNGQ~~E~~HADAK~~E~~VDLHFQDTT VGFHRLSRPLQQYKLT~~E~~DKA KEA~~E~~KEAATIATYNQSYA OKAYHL~~E~~SAGWLESGRVAY

hHARE 11.00 PTAFASQN~~E~~GSGVVGIVDYG PRPK~~E~~EMWDVF~~E~~YRMKD~~E~~ V~~E~~KVYVGDF~~E~~ESGNL~~E~~LL VIMSFPSLTFNTELTEVLAYSN SSARGRAFLEHLLTDSLIRT
rHARE 1122 PT~~E~~YASQK~~E~~GANVVGIVDYG SR~~E~~PK~~E~~EMWDVF~~E~~YRMKD~~E~~ V~~E~~KVYVGDF~~E~~ESGNL~~E~~LL VIMSFPSLTFNTELTEVLAYSN SSARGRAFLEHLLTDSLIRT

hHARE 1200 LFVFPQNSGLGENETL~~E~~SGRDI EHHLNVS~~E~~YYNDLVNGT LOTRIGSKULITASQDPLQP TETRFVDRGAILLOWDIFASN GITHVISRPLKAPPAPVTLT
rHARE 1222 LFVFPQNSGL~~E~~GNKSLSGRDI EHHLTNVNVSYNDLVNGT LRTMLGSQLLTFSQDQLHQ -ETRFVDRGSRILQWDLIAAN GILHISEPLRAPTAATA

hHARE 1300 HTGIGAGIFFAILVTVGA LAAYSYFRINRRTIGFOHE SEEDINVAALGKOOPENTSN PL~~E~~VEST~~E~~SAPPERS~~E~~DPFTD SEERQLEGP~~E~~PLRTL
rHARE 1321 HSGLG~~E~~TGIFCAVVLVTGAIA LAASYFR~~E~~QRTIMSWLASSSPRIS~~E~~LCMRPQRHPS~~E~~PV~~E~~PSQT LENRWR~~E~~LGHC~~E~~GPDMR

rHARE 1421 SQQATTVTPR



Serial No.:

09/842,930

Title:

HYALURONAN RECEPTOR FOR ENDOCYTOSIS

Inventor:

Paul H. Weigel et al.

Group: 1647

Filed:

April 25, 2001

Agent:

Kathryn L. Hester, Ph.D.

Examiner: L. Spector

Docket No.

5820.603

SHEET 39 OF 42 FORMAL DRAWINGS

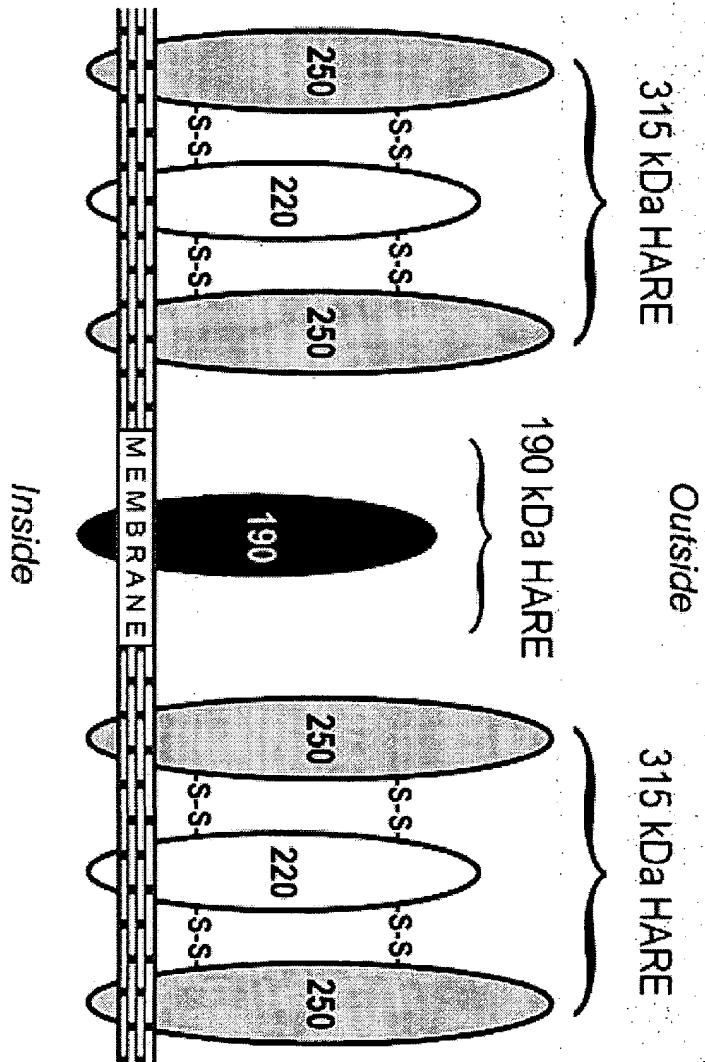
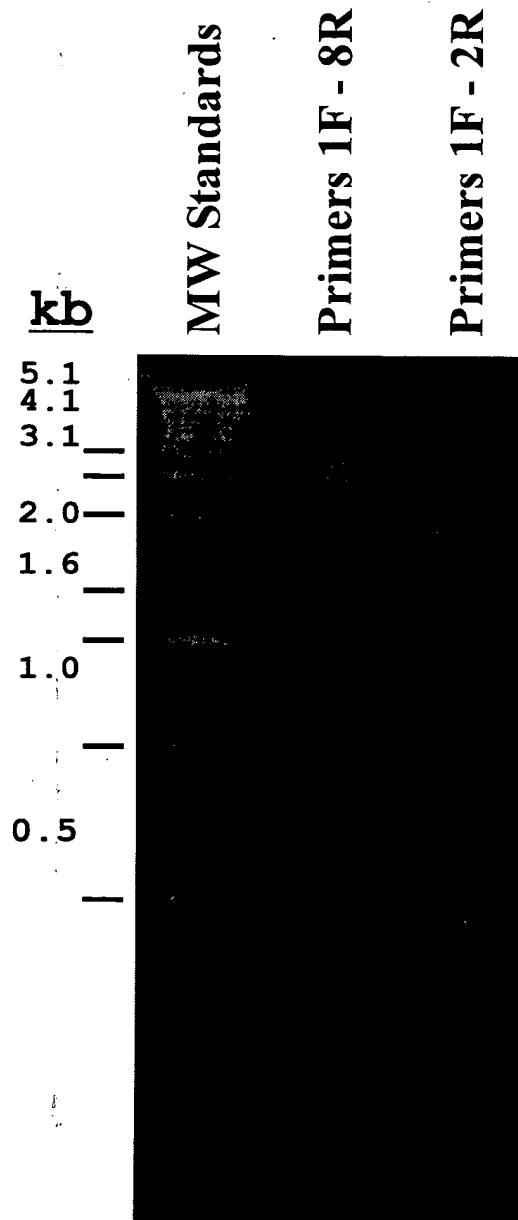


Figure 36



Figure 37

Amplification of the 1394 amino acid HARE
Open Reading Frame from a human lymph
node cDNA Library

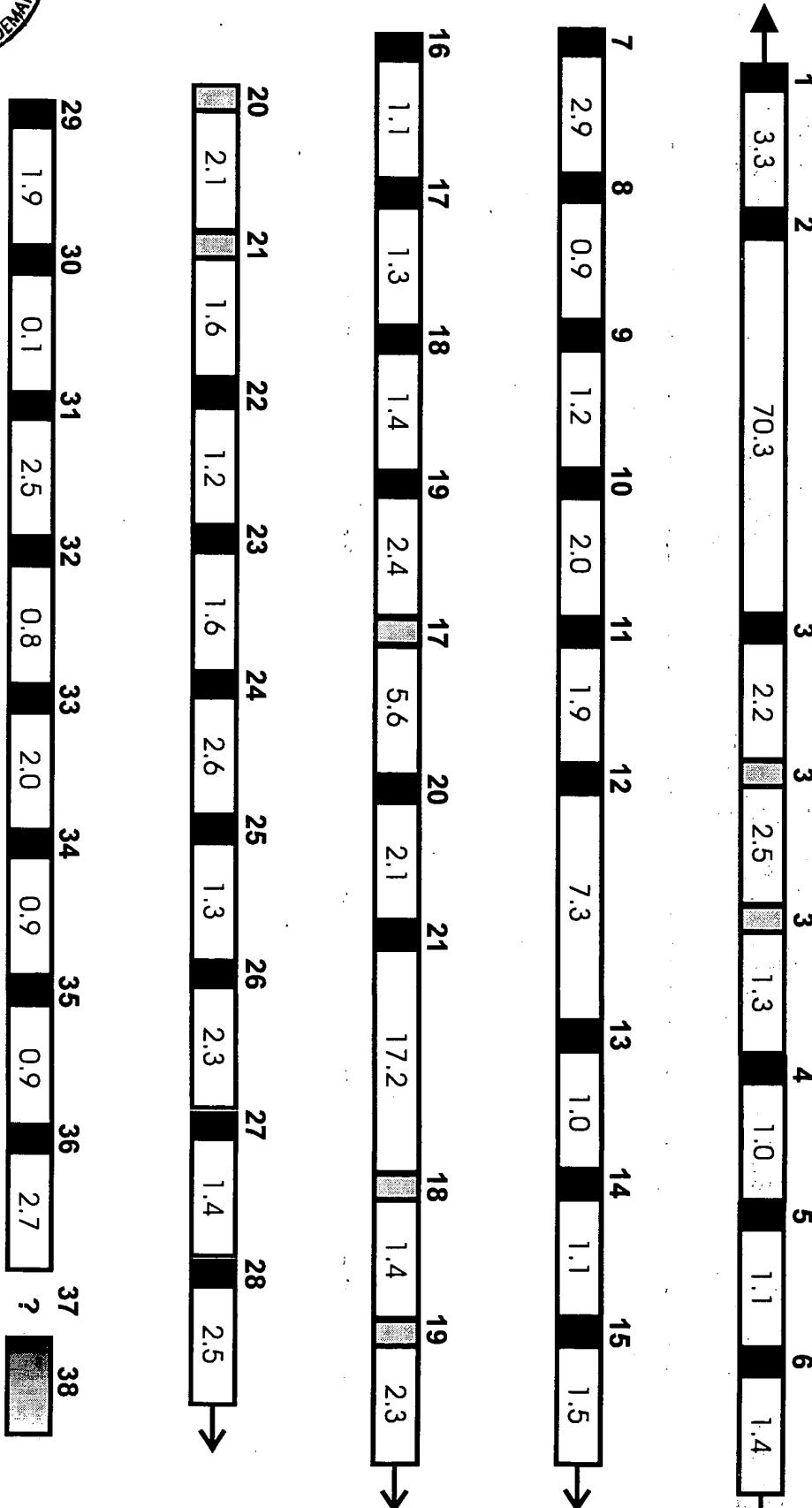


EXPRESS MAIL NO.: EV373446295US DATE DEPOSITED: 11/17/2004
U.S. Patent Application
Serial No.: 09/842,930
Title: HYALURONAN RECEPTOR FOR ENDOCYTOSIS
Inventor: Paul H. Weigel et al. Group: 1647
Filed: April 25, 2001
Agent: Kathryn L. Hester, Ph.D.
Docket No. 5820-603 Examiner: L. Spector
SHEET 40 OF 42
FORMAL DRAWINGS

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SHEET 41 OF 42 FORMAL DRAWINGS

Figure 38

**Schematic Organization of the Human HARE Gene on Chromosome 12
(encoding 1357 of the 1394 amino acids disclosed here)**



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SHEET 42 OF 42 FORMAL DRAWINGS

Decreasing HA Size

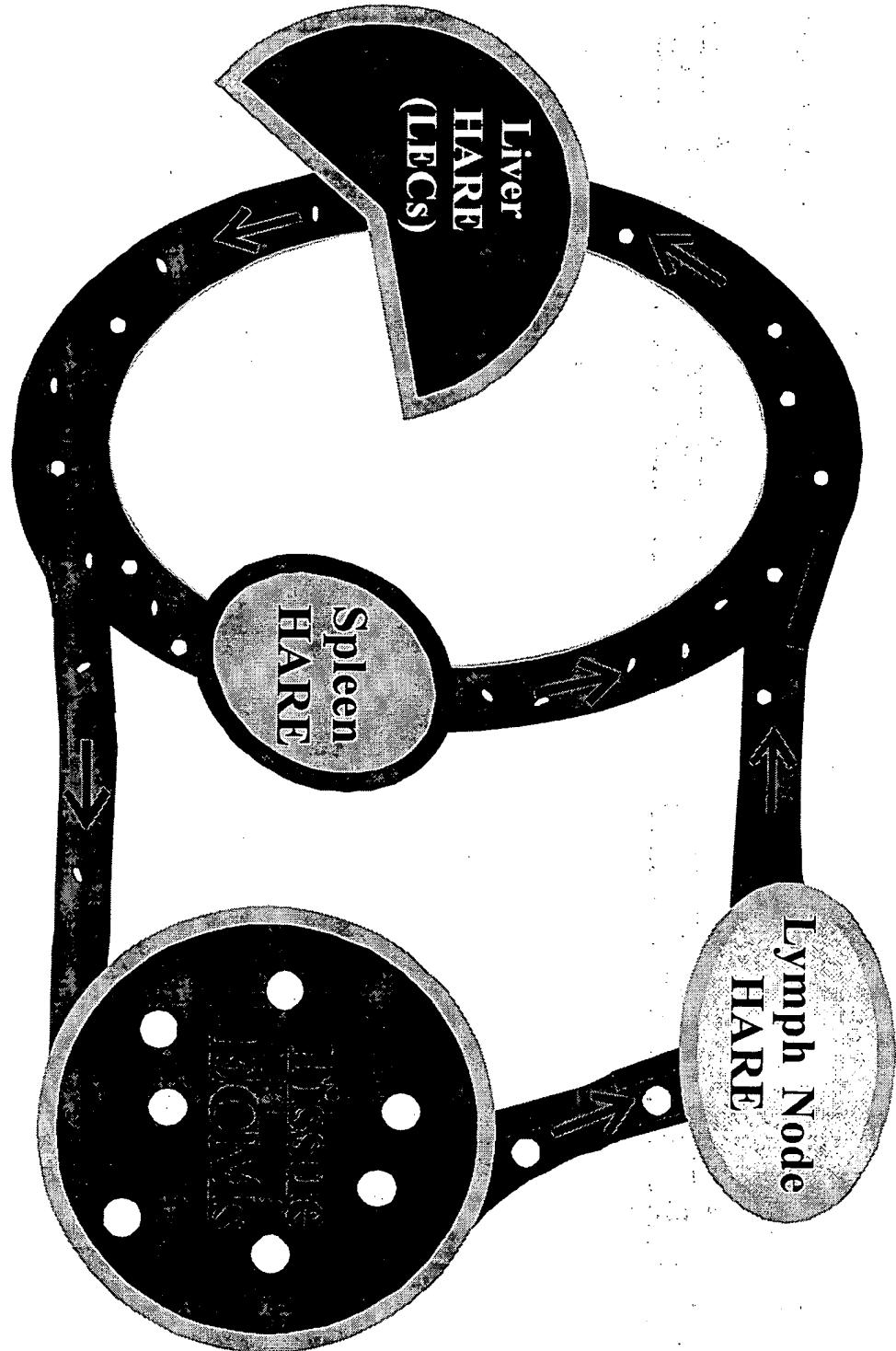


Figure 3 9

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